

FIG. 1

OBLON, SPIVAK, ET AL  
DOCKET #:211648US2S DIV  
INV: Hideo ANDO, et al.  
SHEET 2 OF 44

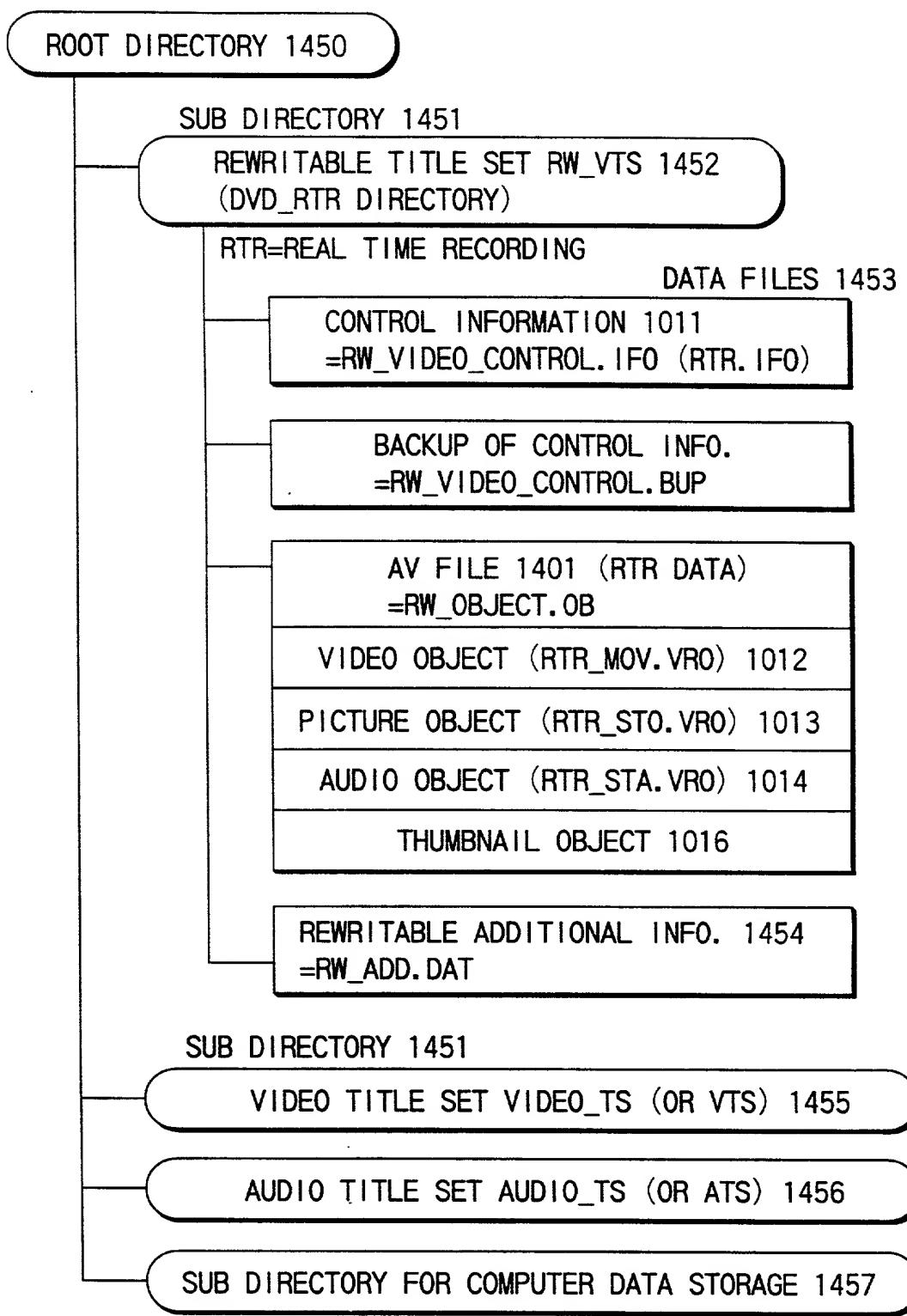


FIG. 2

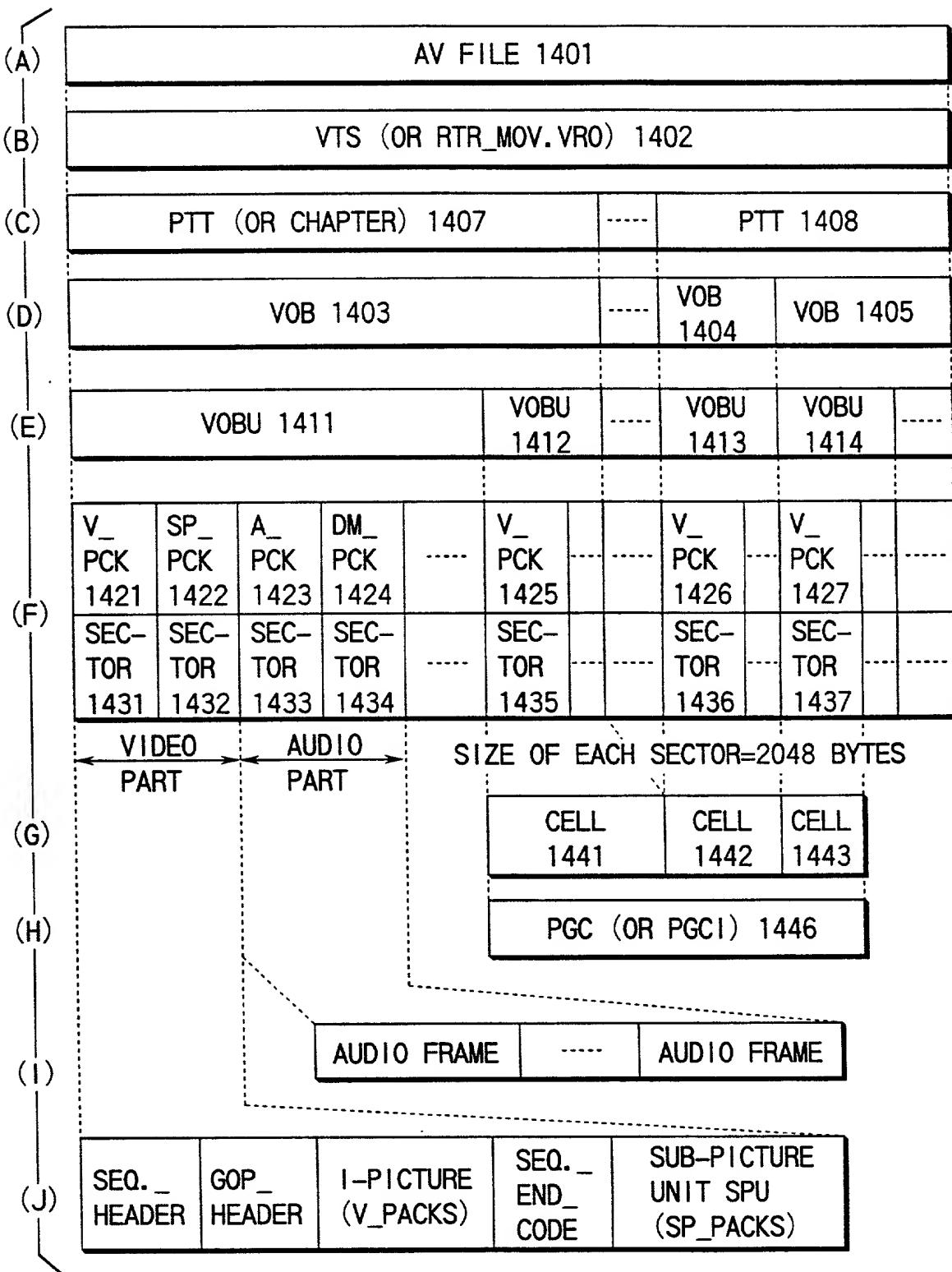


FIG. 3

OBLON, SPIVAK, ET AL  
 DOCKET #:211648US2S DIV  
 INV: Hideo ANDO, et al.  
 SHEET 4 OF 44

AV FILE 1401					
VOB #3 (1) 1463	VOB #1 1461	VOB #3 (2) 1464	VOB #2 1462	UNRECORDED AREA 1460	VOB #3 (3) 1465
EXTENT # $\gamma$ 1473	EXTENT # $\alpha$ 1471	EXTENT # $\delta$ 1474	EXTENT # $\beta$ 1472	EXTENT # $\zeta$ 1470	EXTENT # $\varepsilon$ 1475
					LSNg
				LSNf+1	
				LSNf	
				LSNe+1	
				LSNe	
				LSNd+1	
				LSNd	
				LSNc+1	
				LSNc	
				LSNb+2	
				LSNb+1	
				LSNb	
				LSNa+2	
				LSNa+1	

→ SMALLER LOGICAL SECTOR NUMBER (LSN)  
 ← INNER SIDE OF OPTICAL DISC 1001  
 → LARGER LOGICAL SECTOR NUMBER (LSN)  
 ← OUTER SIDE OF OPTICAL DISC 1001 →

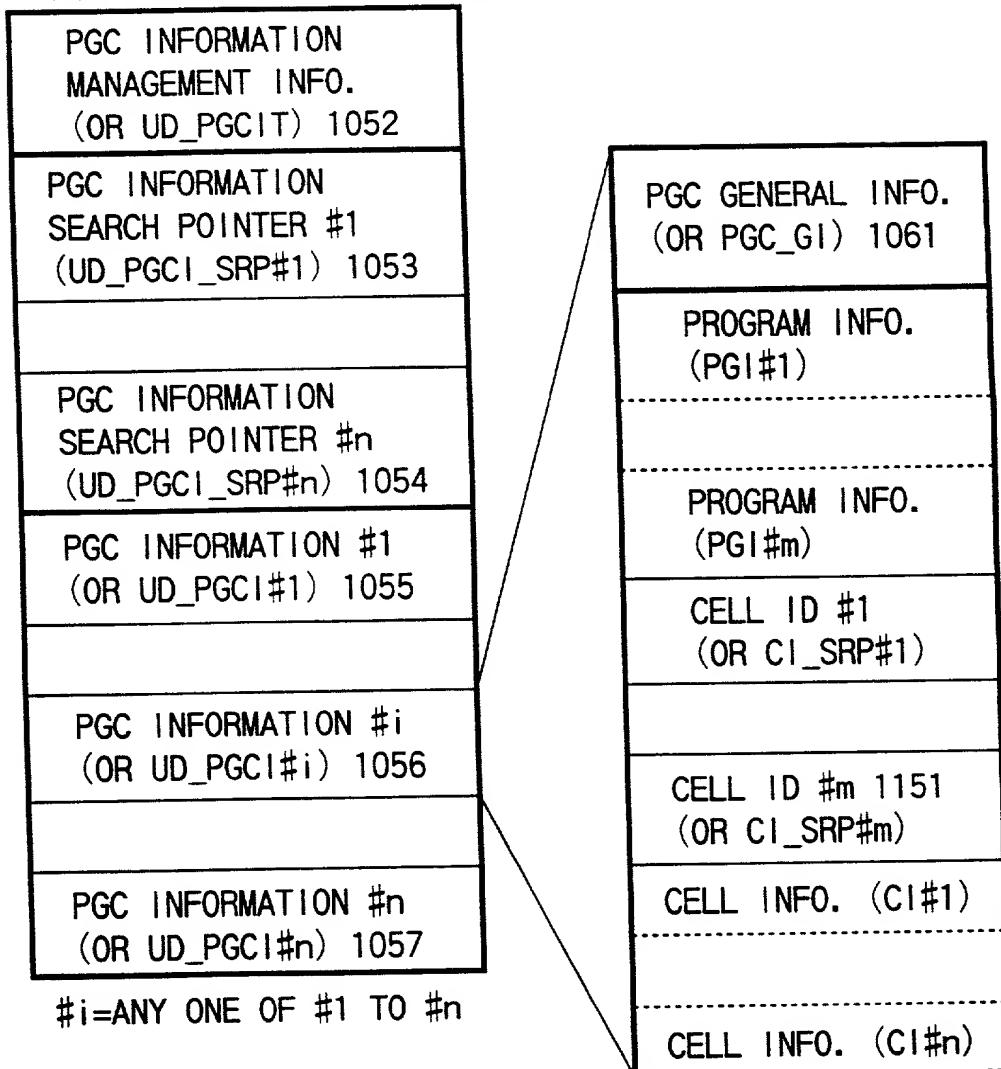
FIG. 4

CONTENTS OF ALLOCATION MAP TABLE 1105	NUMBER OF EXTENTS IN UNRECORDED AREA 1601	1
DISTRIBUTION INFORMATION OF POSITIONS OF UNRECORDED AREA 1621	1ST ADR. (LSN) OF 1ST EXTENT IN UNRECORDED AREA 1606	e-a
	SIZE (SECTORS) OF 1ST EXTENT IN UNRECORDED AREA 1614	f-e
DISTRIBUTION INFORMATION OF POSITIONS OF RECORDED DATA AS TO VOB #1 1622	NUMBER OF EXTENTS IN VOB #1 1602	1
	1ST ADR. (LSN) OF 1ST EXTENT IN VOB #1 1607	b-a
	SIZE (SECTORS) OF 1ST EXTENT IN VOB #1 1615	c-b
DISTRIBUTION INFORMATION OF POSITIONS OF RECORDED DATA AS TO VOB #2 1623	NUMBER OF EXTENTS IN VOB #2 1603	1
	1ST ADR. (LSN) OF 1ST EXTENT IN VOB #2 1608	d-a
	SIZE (SECTORS) OF 1ST EXTENT IN VOB #2 1616	e-d
DISTRIBUTION INFORMATION OF POSITIONS OF RECORDED DATA AS TO VOB #3 1624	NUMBER OF EXTENTS IN VOB #3 1604	3
	1ST ADR. (LSN) OF 1ST EXTENT IN VOB #3 1609	1
	SIZE (SECTORS) OF 1ST EXTENT IN VOB #3 1617	b-a
	1ST ADR. (LSN) OF 2ND EXTENT IN VOB #3 1610	c-a
	SIZE (SECTORS) OF 2ND EXTENT IN VOB #3 1618	d-c
	1ST ADR. (LSN) OF 3RD EXTENT IN VOB #3 1611	f-a
	SIZE (SECTORS) OF 3RD EXTENT IN VOB #3 1619	g-f

FIG. 5

OBLOON, SPIVAK, ET AL  
 DOCKET #:211648US2S DIV  
 INV: Hideo ANDO, et al.  
 SHEET 6 OF 44

PGC CONTROL INFO. (OR UD\_PGCIT) 1103



- \*1> PGC INFORMATION (OR UD\_PGC1) CAN DEFINE A GROUP OF ONE OR MORE PROGRAMS;
- \*2> EACH PROGRAM CAN BE FORMED OF ONE OR MORE CELLS;
- \*3> EACH CELL CAN BE SPECIFIED BY CELL ID (OR CI\_SRP);
- \*4> EACH CELL ID (OR CI\_SRP) CAN INDICATE POSITION (OR START ADDRESS) OF CELL INFORMATION (OR CI);
- \*5> EACH CELL INFORMATION (OR CI) CAN DETERMINE START TIME AND END TIME OF PRESENTATION OF CELL

FIG. 6

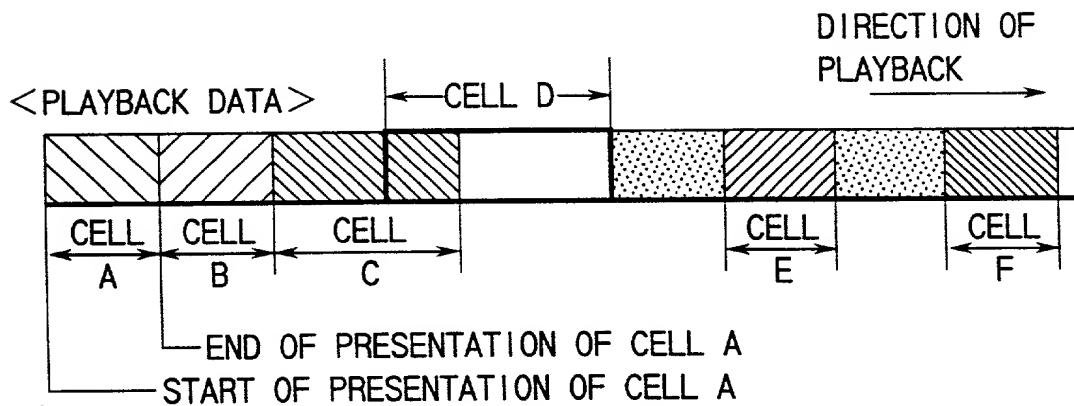


FIG. 7A

PGC INFORMATION (PGCI)

PGC#1 1081		PGC#2 1082		PGC#3 1083	
NUMBER OF CELLS=3		NUMBER OF CELLS=3		NUMBER OF CELLS=5	
#1	CELL A	#1	CELL D	#1	CELL E
#2	CELL B	#2	CELL E	#2	CELL A
#3	CELL C	#3	CELL F	#3	CELL D
—	—	—	—	#4	CELL B
—	—	—	—	#5	CELL E
CELL ID	CELL INFO.	CELL ID	CELL INFO.	CELL ID	CELL INFO.
CI_SRP #m=3	CI #n=3	CI_SRP #m=3	CI #n=3	CI_SRP #m=5	CI #n=4

FIG. 7B

FILE 2301284650

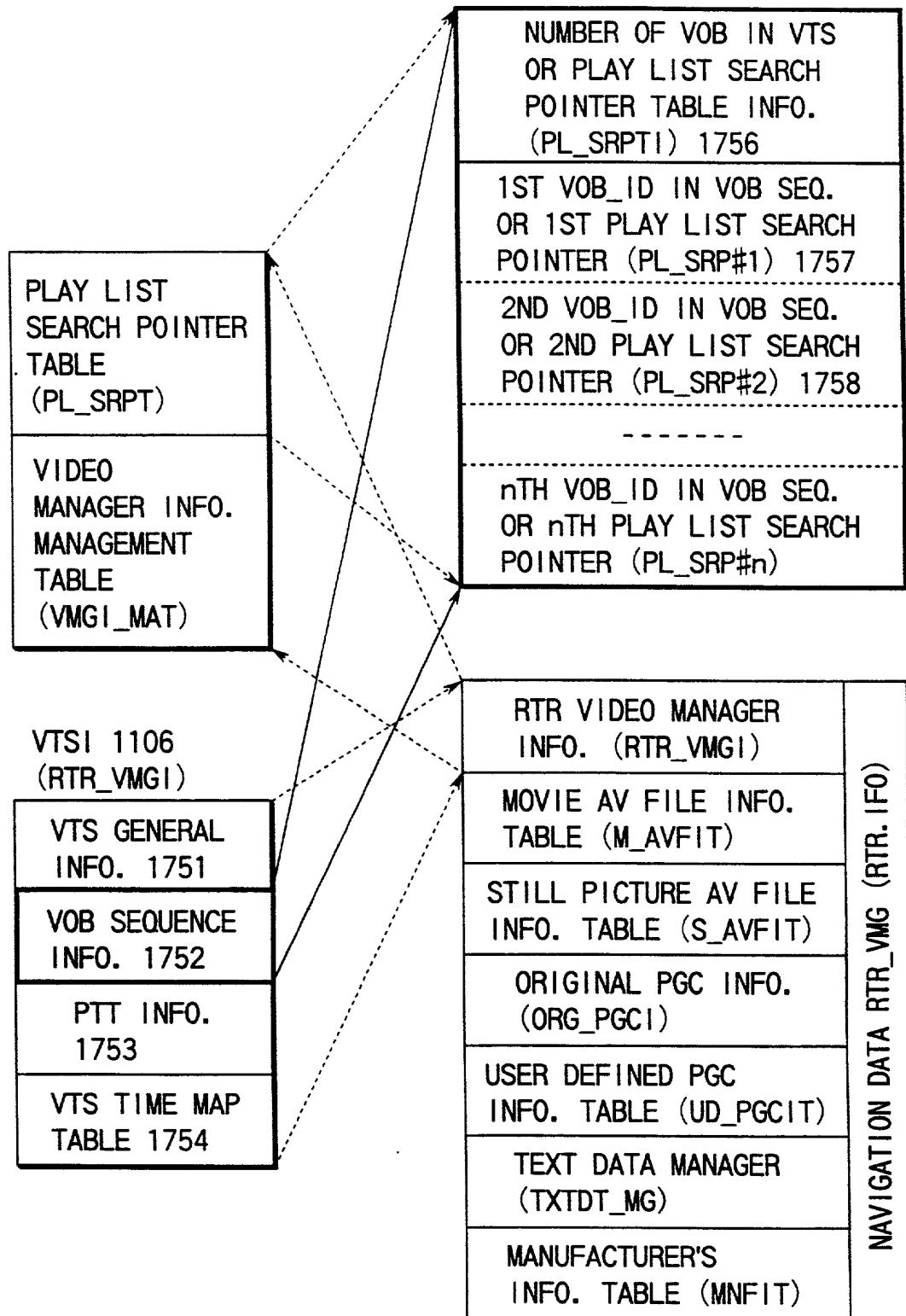


FIG. 8

FIG. 9A

AV FILE 1401			
VTS (OR RTR_MOV. VRO) 1402			

FIG. 9B

VTS (OR RTR_MOV. VRO) 1402			
VOB#1 1461	VOB#2 1462	VOB#3 1763	UNRECORDED AREA 1460
EXTENT# $\alpha$ 1471	EXTENT# $\beta$ 1472	EXTENT# $\gamma$ 1473	EXTENT# $\delta$ 1474

FIG. 9C

AV FILE 1401			
VTS (OR RTR_MOV. VRO/RTR_STA. VRO) 1402			
VOB#A 1771	VOB#B 1772	VOB#C 1773	VOB#D 1774
VIDEO OBJECTS 1012	AUDIO OBJECTS 1014	PICTURE OBJECTS 1013	AUDIO OBJECTS 1014

FIG. 9D

AV FILE 1401			
VTS (OR RTR_MOV. VRO/RTR_STA. VRO) 1402			
M_VOB# →	S_VOGI# →		
VOB#A 1771	VOB#B 1772	VOB#C 1773	VOB#D 1774

FIG. 9E

AV FILE 1401			
VTS (OR RTR_MOV. VRO/RTR_STA. VRO) 1402			
VOB#E 1775	VOB#F 1776	VOB#G 1777	VOB#H 1778
VIDEO OBJECTS 1012	AUDIO OBJECTS 1014	PICTURE OBJECTS 1013	AUDIO OBJECTS 1014

FIG. 9F

→ RTR\_MOV. VRO → RTR\_STA. VRO →

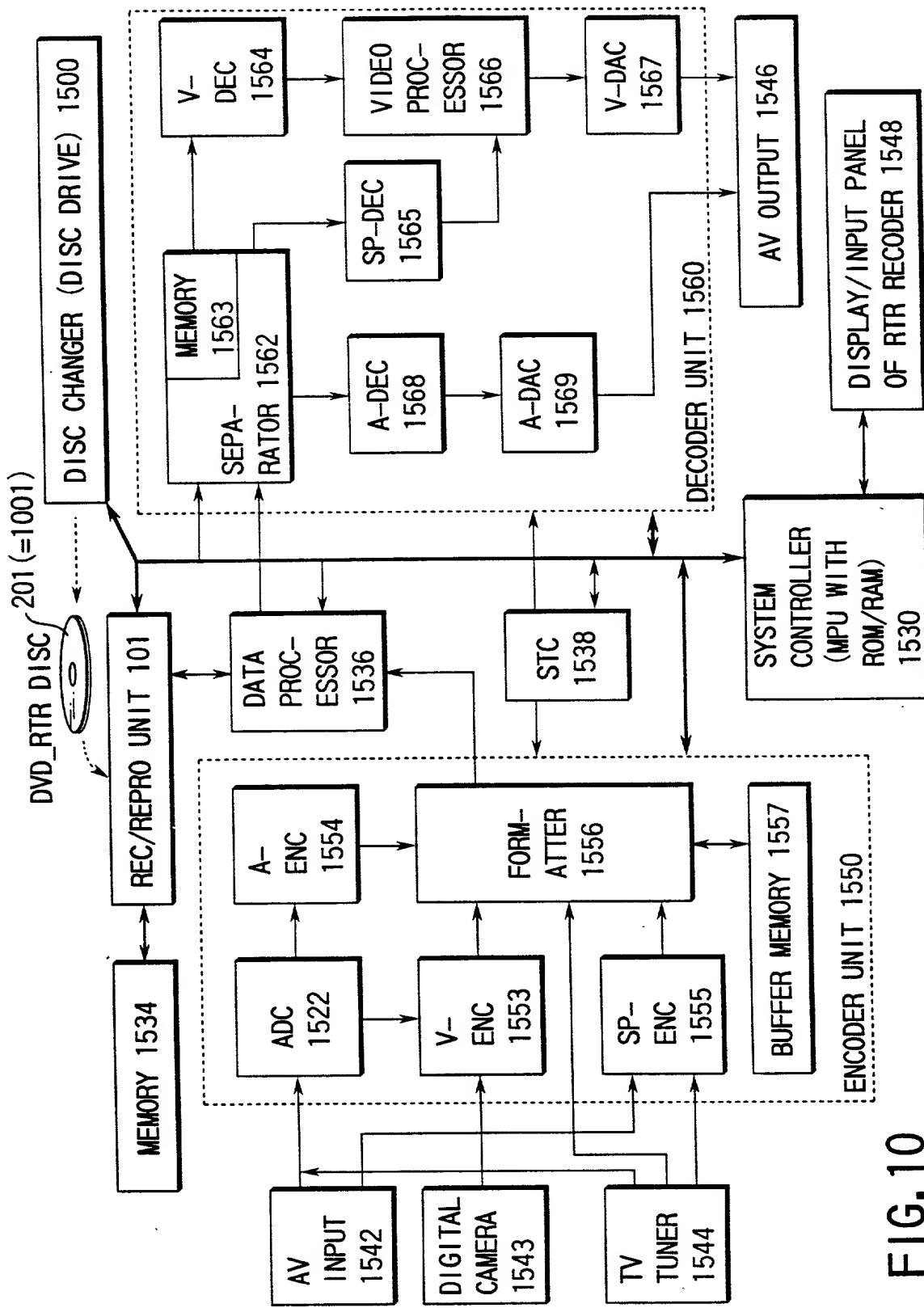


FIG. 10

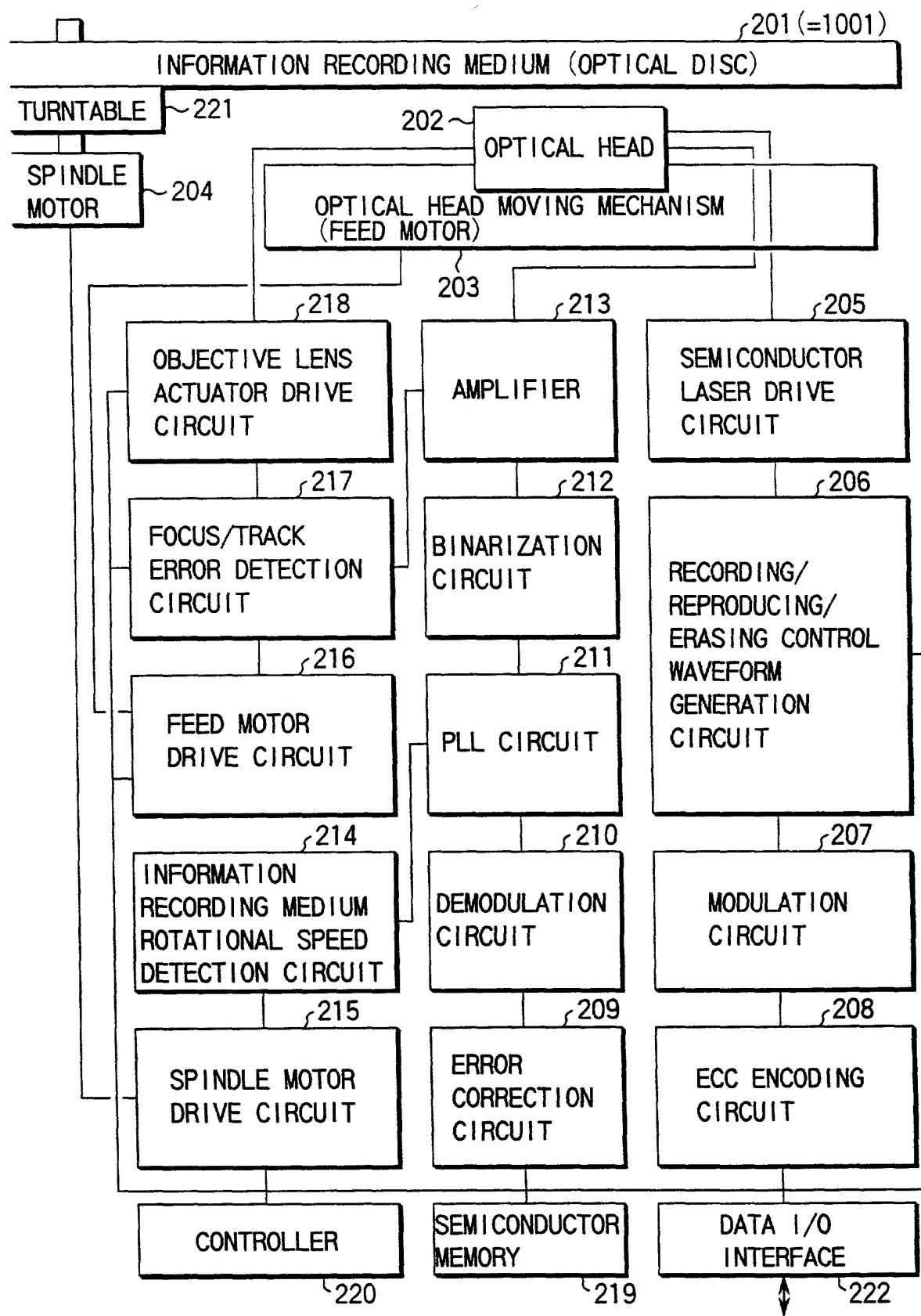


FIG. 11

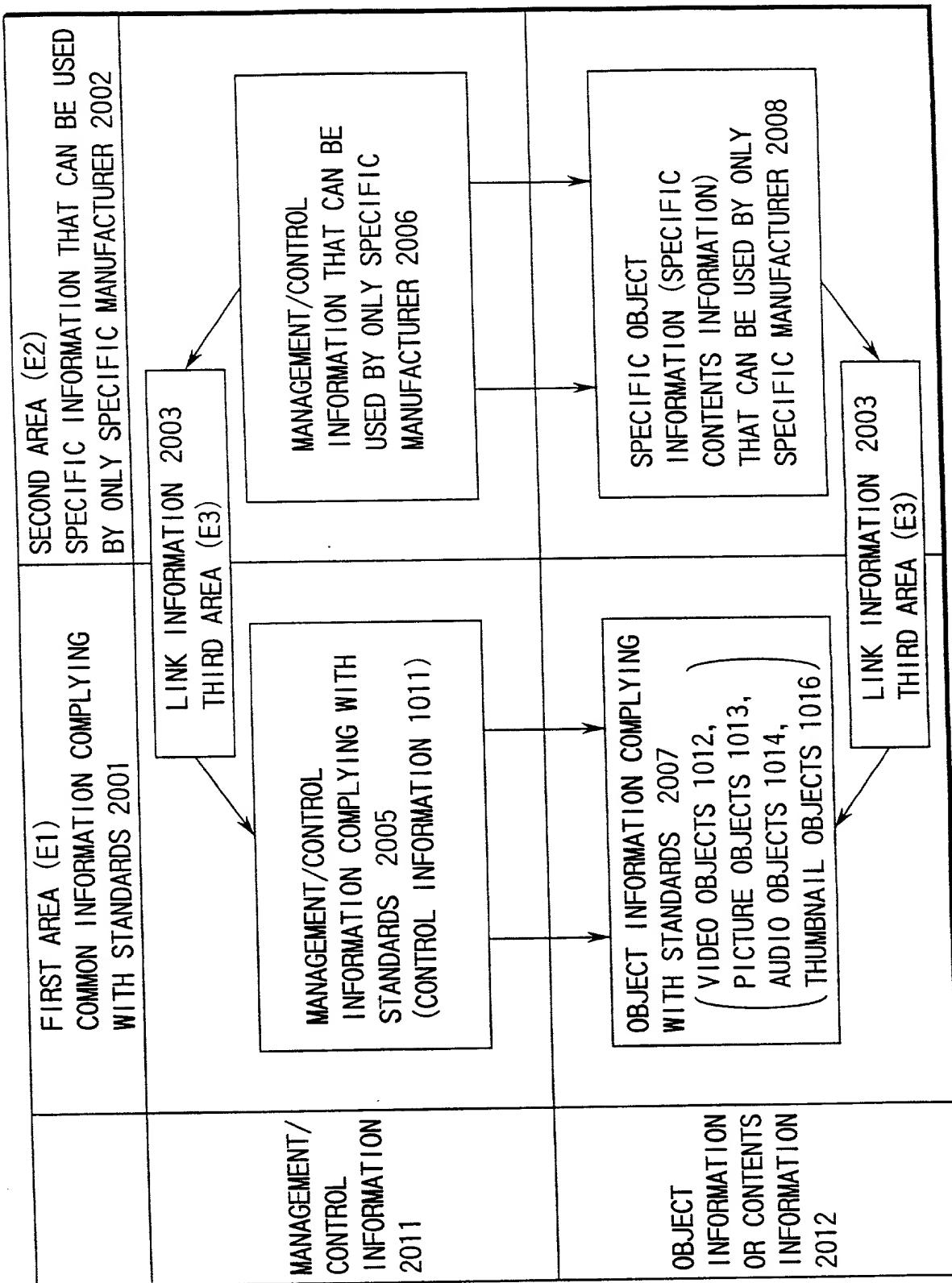


FIG. 12

DETAILED INFORMATION CONTENTS 2021	
CLASSIFICATION ITEM 2020	DATA SIZE OF ONE LINK INFORMATION (TOTAL OF ALL PIECES OF INFORMATION WHICH FOLLOW) (INDICATED BY NUMBER OF SECTORS USED (INTEGER MULTIPLE OF 2,048 BYTES))
LINK INFORMATION SIZE 2022	2030
IDENTIFICATION INFORMATION OF LINK INFORMATION 2023	<p>ID INFORMATION OR LINK INFORMATION</p> <p>NUMBER OF LINK INFORMATION</p> <p>ID INFORMATION OF CHARACTER CODE FOR DRIVE MANUFACTURER USE</p> <p>2031</p>
INFORMATION PERTAINING TO DRIVE MANUFACTURER 2024	<p>DRIVE MANUFACTURER GROUP ID INFORMATION (ID OF GROUP FORMED BY A PLURALITY OF MANUFACTURERS)</p> <p>OF DRIVE MANUFACTURER GROUP THAT CAN USE SPECIFIC INFORMATION ASSOCIATED WITH THIS LINK INFORMATION</p> <p>2034</p>
FUNCTION INFORMATION 2025	<p>DRIVE MANUFACTURER ID INFORMATION (DRIVE MANUFACTURER NAME OR THE LIKE) OF DRIVE MANUFACTURER THAT CAN USE SPECIFIC INFORMATION ASSOCIATED WITH THIS LINK INFORMATION</p> <p>2035</p> <p>TIME INFORMATION (SETTING DATE OF DRIVE MANUFACTURER ID OR THE LIKE) PERTAINING TO DRIVE MANUFACTURER THAT CAN USE SPECIFIC INFORMATION ASSOCIATED WITH THIS LINK INFORMATION</p> <p>2036</p> <p>ADDITIONAL INFORMATION PERTAINING TO THIS LINK INFORMATION WHICH CAN BE SET BY DRIVE MANUFACTURER</p> <p>2037</p> <p>FUNCTION INFORMATION (CATEGORY ID) WHICH PERTAINS TO SPECIFIC INFORMATION AND IS COMMON TO A PLURALITY OF COMPANIES</p> <p>2040</p> <p>INFORMATION PERTAINING TO LINK PATTERN OF SPECIFIC INFORMATION ASSOCIATED WITH THIS LINK INFORMATION</p> <p>2041</p>

FIG. 13A

CLASSIFICATION ITEM 2020	DETAILED INFORMATION CONTENTS 2021												
FUNCTION INFORMATION 2025	CORRECTION CONTENT AUTOMATIC INSPECTION INFORMATION FOR AUTOMATICALLY CHANGING/CORRECTING CONTENTS OF SPECIFIC INFORMATION THAT CAN BE USED BY ONLY SPECIFIC MANUFACTURER IN ACCORDANCE WITH CHANGE IN CONTENTS OF COMMON INFORMATION COMPLYING WITH STANDARDS 2042												
LINK DESIGNATION LOCATIONS OF LINK SOURCE AND LINK DESTINATION, LINK DESIGNATION RANGE, AND PRIORITY ORDER INFORMATION 2026	<table border="1"> <tr> <td>NUMBER OF LINK DESIGNATION LOCATIONS IN COMMON INFORMATION COMPLYING WITH STANDARDS</td> <td>2044</td> </tr> <tr> <td>FIRST PRIORITY LINK DESIGNATION LOCATION INFORMATION IN COMMON INFORMATION COMPLYING WITH STANDARDS</td> <td>2045</td> </tr> <tr> <td>FIRST PRIORITY LINK DESIGNATION LOCATION INFORMATION IN COMMON INFORMATION COMPLYING WITH STANDARDS</td> <td>2046</td> </tr> <tr> <td>SECOND PRIORITY LINK DESIGNATION LOCATION INFORMATION IN COMMON INFORMATION COMPLYING WITH STANDARDS</td> <td>2047</td> </tr> <tr> <td>SECOND PRIORITY LINK DESIGNATION LOCATION INFORMATION IN COMMON INFORMATION COMPLYING WITH STANDARDS</td> <td>2048</td> </tr> <tr> <td>⋮</td> <td>⋮</td> </tr> </table>	NUMBER OF LINK DESIGNATION LOCATIONS IN COMMON INFORMATION COMPLYING WITH STANDARDS	2044	FIRST PRIORITY LINK DESIGNATION LOCATION INFORMATION IN COMMON INFORMATION COMPLYING WITH STANDARDS	2045	FIRST PRIORITY LINK DESIGNATION LOCATION INFORMATION IN COMMON INFORMATION COMPLYING WITH STANDARDS	2046	SECOND PRIORITY LINK DESIGNATION LOCATION INFORMATION IN COMMON INFORMATION COMPLYING WITH STANDARDS	2047	SECOND PRIORITY LINK DESIGNATION LOCATION INFORMATION IN COMMON INFORMATION COMPLYING WITH STANDARDS	2048	⋮	⋮
NUMBER OF LINK DESIGNATION LOCATIONS IN COMMON INFORMATION COMPLYING WITH STANDARDS	2044												
FIRST PRIORITY LINK DESIGNATION LOCATION INFORMATION IN COMMON INFORMATION COMPLYING WITH STANDARDS	2045												
FIRST PRIORITY LINK DESIGNATION LOCATION INFORMATION IN COMMON INFORMATION COMPLYING WITH STANDARDS	2046												
SECOND PRIORITY LINK DESIGNATION LOCATION INFORMATION IN COMMON INFORMATION COMPLYING WITH STANDARDS	2047												
SECOND PRIORITY LINK DESIGNATION LOCATION INFORMATION IN COMMON INFORMATION COMPLYING WITH STANDARDS	2048												
⋮	⋮												
	NUMBER OF LINK DESIGNATION LOCATIONS IN SPECIFIC INFORMATION THAT CAN BE USED BY ONLY SPECIFIC MANUFACTURER 2054												
	FIRST PRIORITY LINK DESIGNATION LOCATION INFORMATION IN SPECIFIC INFORMATION 2055												
	FIRST PRIORITY LINK DESIGNATION LOCATION INFORMATION IN SPECIFIC INFORMATION 2056												

**FIG. 13B**

CLASSIFICATION ITEM	2020	DETAILED INFORMATION CONTENTS 2021
LINK DESIGNATION LOCATIONS OF LINK SOURCE AND LINK DESTINATION, LINK DESIGNATION RANGE, AND PRIORITY ORDER INFORMATION	2026	SECOND PRIORITY LINK DESIGNATION LOCATION INFORMATION IN SPECIFIC INFORMATION SECOND PRIORITY LINK DESIGNATION LOCATION INFORMATION IN SPECIFIC INFORMATION 2058 :
TIME INFORMATION PERTAINING TO THIS LINK INFORMATION	2027	LAST RECORDING/CHANGE TIME (DATE) INFORMATION OF THIS LINK INFORMATION EFFECTIVE PERIOD INFORMATION OF THIS LINK INFORMATION (DUE DATE OF LINK INFORMATION)
SPECIFIC INFORMATION	2028	TIME INFORMATION PERTAINING TO SPECIFIC INFORMATION (TIME BAND INFORMATION IN WHICH SPECIFIC INFORMATION CAN BE USED OR THE LIKE) SPECIFIC INFORMATION CAN BE USED OR THE LIKE)
USABLE/UNUSABLE CONDITION INFORMATION		USABLE/UNUSABLE DETERMINATION FLAG FOR SPECIFIC INFORMATION PASSWORD INFORMATION FOR SETTING SECURITY MODEL INFORMATION THAT CAN USE SPECIFIC INFORMATION (OLDEST MODEL THAT CAN USE SPECIFIC INFORMATION) INFORMATION PERTAINING TO USABLE CONDITION FOR SPECIFIC INFORMATION (USER RANGE DESIGNATION THAT ALLOWS USE OF SPECIFIC INFORMATION OR THE LIKE) SPACE INFORMATION PERTAINING TO USE CONDITION OF SPECIFIC INFORMATION (USABLE REGION OR THE LIKE)

FIG. 13C

NUMBER OF PIECES OF ID INFORMATION	ATTRIBUTE OF ID INFORMATION	VARIOUS EMBODIMENTS	DETAILED CONTENTS OF EMBODIMENTS	EFFECT OF EMBODIMENTS 2085
2081	ORIGINAL ID INFORMATION (1/0 INFORMATION)	SYSTEMATICALLY MANAGE ID INFORMATION IN UNITS OF DRIVE MANUFACTURERS BY SPECIFIC ORGANIZATION	(DVD FORUM OR THE LIKE) ASSIGN ID INFORMATION TO EACH DRIVE MANUFACTURER BY THIRD PARTY COMMON ORGANIZATION	<ul style="list-style-type: none"> <li>• ID DUPLICATION AMONG DIFFERENT DRIVE MANUFACTURERS CAN BE AVOIDED</li> <li>• THE NUMBER OF DIGITS REQUIRED FOR ID INFORMATION CAN BE MINIMIZED</li> </ul>
2091	INDEPENDENT INFORMATION	SET ORIGINAL ID INFORMATION BY EACH DRIVE MANUFACTURER	NO MANAGEMENT BY SPECIFIC ORGANIZATION DETERMINE INFORMATION OF UNSUPPORTED MANUFACTURER WHEN SPECIFIC INFORMATION CANNOT BE READ	<ul style="list-style-type: none"> <li>• NO ID INFORMATION MANAGEMENT ORGANIZATION IN UNITS OF DRIVE MANUFACTURERS IS REQUIRED</li> <li>• ID INFORMATION CAN BE ARBITRARILY SET</li> </ul>

FIG. 14A

NUMBER OF PIECES OF ID INFORMATION	ATTRIBUTE OF ID INFORMATION	VARIOUS EMBODIMENTS 2083	DETAILED CONTENTS OF EMBODIMENTS 2084	EFFECT OF EMBODIMENTS 2085
2081	CHARACTER INFORMATION 2091	DIRECTLY DESCRIBE DRIVE MANUFACTURER NAME IN LINK INFORMATION	DESCRIBE MANUFACTURER NAME USING CHARACTER CODE 2034 (JIS CODE OR THE LIKE) SET IN LINK INFORMATION	<ul style="list-style-type: none"> <li>• DRIVE MANUFACTURER ID INFORMATION CAN BE EASILY SET</li> <li>• ID DUPLICATION AMONG DIFFERENT DRIVE MANUFACTURERS HARDLY OCCURS</li> </ul>
2082	INDEPENDENT INFORMATION 2096	DESIGNATE CORRESPONDING NUMBER FROM DRIVE MANUFACTURER LIST TABLE (DESCRIBED BY CHARACTER INFORMATION)	REGISTER MANUFACTURER NAME IN LIST TABLE SET AT DIFFERENT POSITION IN UNITS OF DISCS, AND DESIGNATE THE REGISTERED NUMBER IN LINK INFORMATION	<ul style="list-style-type: none"> <li>• NO CHARACTER CODE NEED BE SET IN LINK INFORMATION</li> <li>• REGISTERED MANUFACTURER NAME CAN BE DETECTED</li> <li>• INFORMATION SIZE IN LINK INFORMATION CAN BE MINIMIZED</li> </ul>
2083		DESCRIBE IN CHARACTER INFORMATION DRIVE MODEL NUMBER FOR WHICH LINK INFORMATION IS SET	DETERMINE BASED ON DRIVE MODEL NUMBER THAT ONLY MANUFACTURER WHICH SELLS THAT MODEL CAN USE SPECIFIC INFORMATION	<ul style="list-style-type: none"> <li>• LINK INFORMATION CAN BE FLEXIBLY SET UP IN UNITS OF DRIVE MODELS</li> <li>• A PLURALITY OF PIECES OF ID INFORMATION CAN BE ASSIGNED</li> </ul>

FIG. 14B

NUMBER OF PIECES OF ID INFORMATION	ATTRIBUTE OF ID INFORMATION	VARIOUS EMBODIMENTS	DETAILED CONTENTS OF EMBODIMENTS 2084	EFFECT OF EMBODIMENTS 2085
2081	COMBINE INDEPENDENT INFORMATION WITH TIME INFORMATION WITH INFORMATION IN RIGHT COLUMN 2092	USE TIME (BCD FORMAT) 2036 WHEN DRIVE MANUFACTURER ID INFORMATION IS SET TOGETHER	DETERMINE MANUFACTURER THAT CAN USE SPECIFIC INFORMATION FROM TIME INFORMATION IN BCD FORMAT AND DRIVE MANUFACTURER ID INFORMATION	• ID DUPLICATION AMONG DIFFERENT DRIVE MANUFACTURERS CAN BE AVOIDED •UNSUPPORTED MANUFACTURER RECOGNITION ERROR RATE CAN BE GREATLY REDUCED BY COMBINING TWO PIECES OF INFORMATION
2082	INFORMATION COMBINED WITH TIME INFORMATION WITH INFORMATION IN RIGHT COLUMN 2098	USE ADDITIONAL INFORMATION 2037 SET BY DRIVE MANUFACTURER WITH ADDITIONAL INFORMATION TOGETHER	DETERMINE MANUFACTURER THAT CAN USE SPECIFIC INFORMATION FROM ADDITIONAL INFORMATION AND DRIVE MANUFACTURER ID	DETERMINE MANUFACTURER THAT CAN USE SPECIFIC INFORMATION FROM PASSWORD AND DRIVE MANUFACTURER ID
2083	INFORMATION COMBINED WITH TIME INFORMATION WITH INFORMATION IN RIGHT COLUMN 2099	USE PASSWORD INFORMATION 2072 FOR SETTING SECURITY TOGETHER		

FIG. 14C

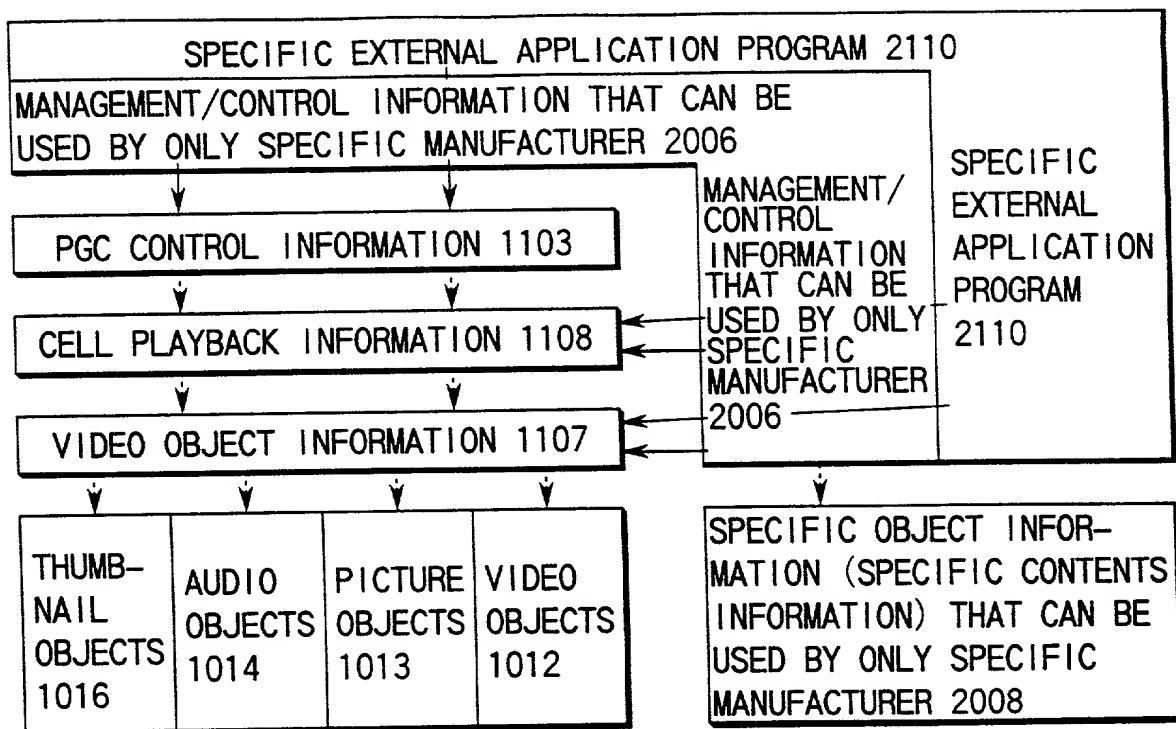


FIG. 15

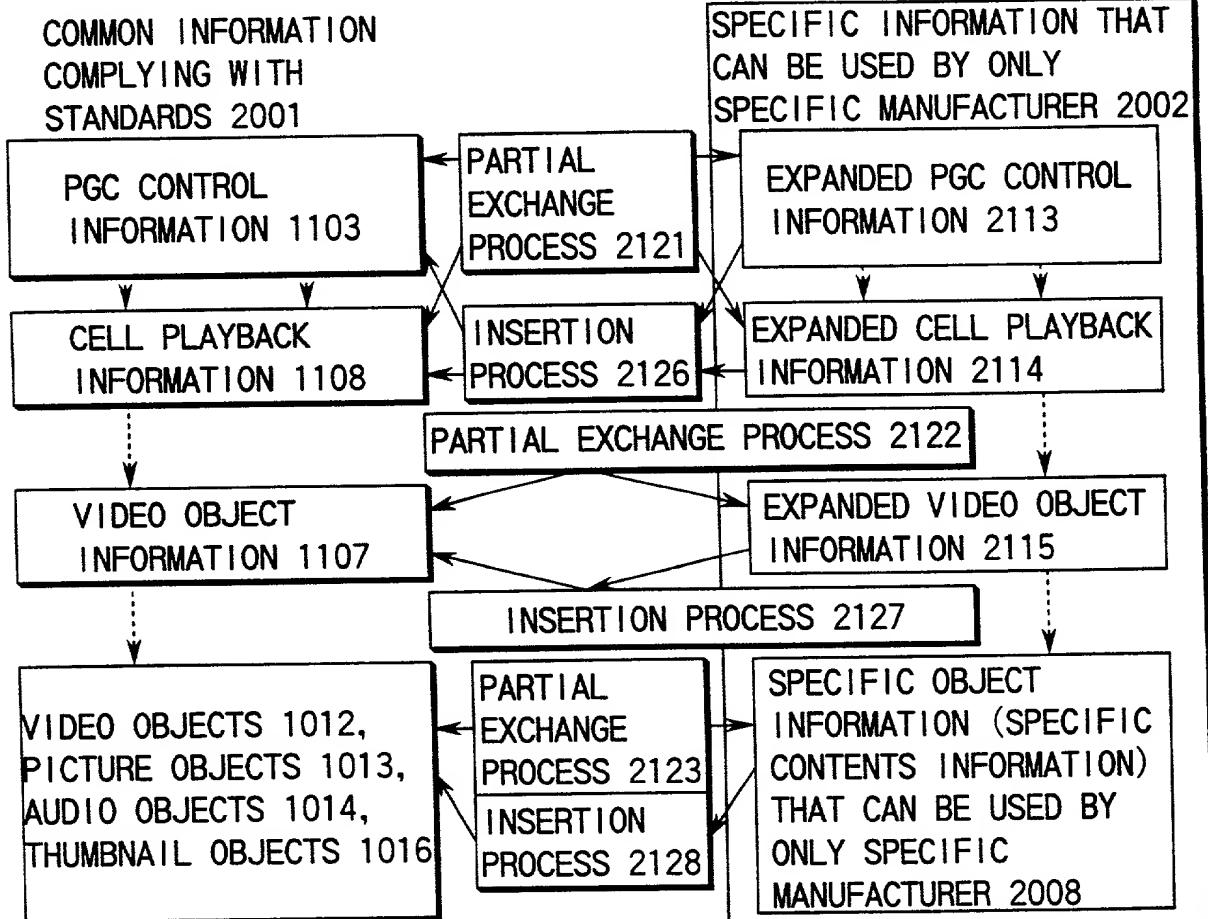


FIG. 16

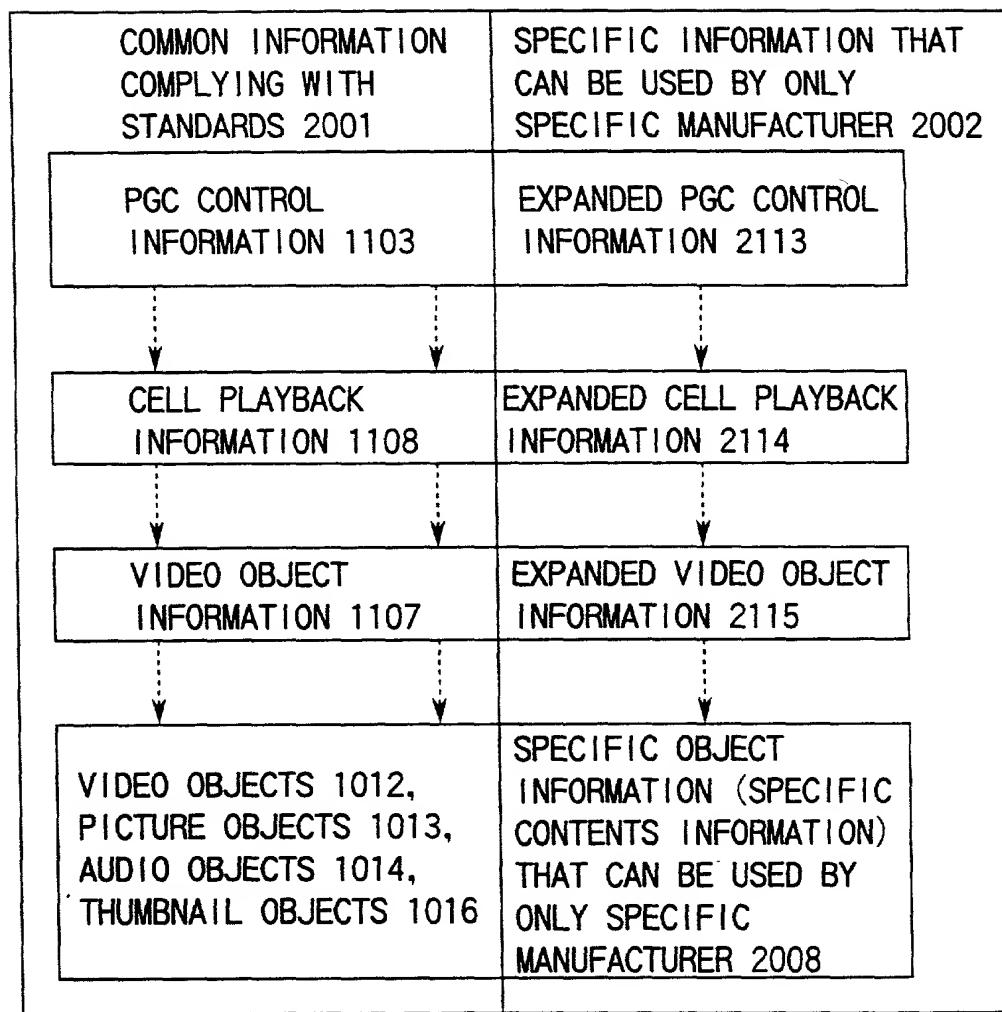


FIG. 17

CATEGORY ID	LINK PATTERN ID	OUTLINE OF FUNCTION CONTENTS 2131	RELEVANT OBJECT INFORMATION CONTENT RANGE 2132	MANAGEMENT/CONTROL INFORMATION COMPLYING WITH STANDARDS OF LINKED OBJECTS 2133	THIRD PARTY INFORMATION THAT CAN BE COMMONLY USED 2134
1	A	SYSTEMATICALLY MANAGE INFORMATION RECORDED IN RECORDING MULTILAYERS	ALL	PGC_info. 1103 PGC_info. 1107	COMPANIES B AND C
2	A	VIDEO RECORDING USING PROGRAM RESERVATION INFORMATION	ALL	ALL PIECES OF MANAGEMENT/CONTROL INFORMATION	COMPANIES B AND C
3	A	SEARCH PROCESS USING QUARRY INFORMATION	ALL	ALL PIECES OF MANAGEMENT/CONTROL INFORMATION	COMPANY D
4	B	PLAY BACK/DISPLAY VIDEO/STILL PICTURE INFORMATION RECORDED IN DIFFERENT FORMAT	PTT 1408	VOB_info. 1107 OBJECT 2007	COMPANY B
5	B	VARIABLE SPEED PLAYBACK PROCESS	ALL	Cell_info. 1108	COMPANY C
6	B	SIMULTANEOUSLY PLAY BACK/DISPLAY AFTER-RECORDED INFORMATION	ALL	Cell_info. 1108	COMPANY A ONLY

FIG. 18A

CATEGORY ID	LINK PATTERN ID	OUTLINE OF FUNCTION CONTENTS 2131	RELEVANT OBJECT INFORMATION CONTENT RANGE 2132	MANAGEMENT/CONTROL INFORMATION COMPLYING WITH STANDARDS OF LINKED OBJECTS 2133	THIRD PARTY INFORMATION THAT CAN BE COMMONLY USED 2134
7	B	DISPLAY/OUTPUT SPECIAL EDIT VIDEO INFORMATION	PTT 1408	Cell_info. 1108	COMPANY B
8	C	CM/COMMENT AUTOMATIC INSERTION	PTT 1407	Cell_info. 1108	COMPANIES C AND D
9	D	ADD SECURITY FUNCTION	PTT 1407	V0B_info. 1107	COMPANY A ONLY
10	D	SIMULTANEOUS DISPLAY OF SMALL WINDOW	PTT 1407	Cell_info. 1108	COMPANY A ONLY
11	D	SET IMAGE QUALITY IMPROVING PARAMETER	ALL	V0B_info. 1107	COMPANY D
12	D	SET USER RECORDING/PLAYBACK LOCATION	ALL	Cell_info. 1108	COMPANIES B AND C

FIG. 18B

EDIT CONTROL INFORMATION 1023			
(A)	EDIT HISTORY INFORMATION 2141	LINK INFORMATION 2003	...
(B)	DATE/TIME INFORMATION OF LATEST EDIT PROCESS 2144	DATE/TIME INFORMATION OF SECOND LATEST EDIT PROCESS 2145	DATE/TIME INFORMATION OF THIRD LATEST EDIT PROCESS 2146
(C)	DATE/TIME INFORMATION OF LATEST EDIT PROCESS 2144	DATE/TIME INFORMATION OF SECOND LATEST EDIT PROCESS 2145	DATE/TIME INFORMATION OF THIRD LATEST EDIT PROCESS 2146

FIG. 19

DESIGNATION LOCATION	SETTING METHOD OF DESIGNATION LOCATION	DESCRIPTION OF PRACTICAL METHOD	EFFECTS (MERITS) OF RESPECTIVE EMBODIMENTS
ARBITRARY LOCATION CAN BE DESIGNATED	DIRECTLY INSERT "POINTER INFORMATION" IN COMMON INFORMATION [A]	<ul style="list-style-type: none"> <li>DIRECTLY INSERT "POINTER INFORMATION" IN COMMON INFORMATION 2001</li> <li>DESCRIBE TAG INFORMATION AND POINTER SIZE INFORMATION AT HEAD POSITION OF POINTER INFORMATION TO AVOID CONFUSION WITH OTHER COMMON INFORMATION DESIGNATE ID (OR NUMBER) OF CORRESPONDING LINK INFORMATION IN POINTER INFORMATION</li> </ul>	<ul style="list-style-type: none"> <li>ARBITRARY LOCATION AND RANGE IN COMMON INFORMATION 2001 CAN BE DESIGNATED</li> <li>SINCE POINTER INFORMATION SIZE IS SMALL, ENTIRE COMMON INFORMATION 2001 IS FREE FROM ANY LARGE INCREASE IN INFORMATION SIZE DUE TO INSERTION</li> </ul>

FIG. 21A

DESIGNATION LOCATION	SETTING METHOD OF DESIGNATION LOCATION	DESCRIPTION OF PRACTICAL METHOD	EFFECTS (MERITS) OF RESPECTIVE EMBODIMENTS
ARBITRARY LOCATION CAN BE DESIGNATED	DIRECTLY INSERT "LINK INFORMATION" IN COMMON INFORMATION [B]	<ul style="list-style-type: none"> <li>DIRECTLY INSERT "LINK INFORMATION" IN COMMON INFORMATION 2001</li> <li>DESCRIBE TAG INFORMATION AND POINTER SIZE INFORMATION AT HEAD POSITION OF POINTER INFORMATION TO AVOID CONFUSION WITH OTHER COMMON INFORMATION</li> <li>DISTRIBUTE INDIVIDUAL LINK INFORMATION IN COMMON INFORMATION 2001</li> </ul>	<ul style="list-style-type: none"> <li>ARBITRARY LOCATION AND RANGE IN COMMON INFORMATION 2001 CAN BE DESIGNATED</li> <li>SINCE LINK INFORMATION CAN BE DIRECTLY PLAYED BACK IN COMMON INFORMATION 2001, QUICK ACCESS TO 2002 IS ACHIEVED</li> </ul>

FIG. 21B

DESIGNATION LOCATION	SETTING METHOD OF DESIGNATION LOCATION	DESCRIPTION OF PRACTICAL METHOD	EFFECTS (MERITS) OF RESPECTIVE EMBODIMENTS
DESIGNATION LOCATION AND RANGE ARE LIMITED IN ADVANCE ↓ VOB_Info, Cell_Info, PGC_Info, AND THE LIKE	ASSURE DESCRIPTION COLUMN FOR DESIGNATING LINK INFORMATION IN COMMON INFORMATION [C]	<ul style="list-style-type: none"> <li>ASSURE DESCRIPTION COLUMN INDICATING ID (OR NUMBER) OF LINK INFORMATION AT INFORMATION DESCRIPTION LOCATIONS PERTAINING TO CORRESPONDING VOBs, CELLS, PGCs IN VIDEO OBJECT</li> <li>INFORMATION 1107, PGC CONTROL INFORMATION 1103, AND CELL PLAYBACK INFORMATION 1108</li> <li>COLUMN HAS NO ENTRY IF LINK INFORMATION IS NOT DESIGNATED</li> </ul>	<ul style="list-style-type: none"> <li>SINCE TAG INFORMATION AND SUBSEQUENT INFORMATION INSERTED IN COMMON INFORMATION 2001 NEED NOT BE SKIPPED, READ ERROR IN COMMON INFORMATION 2001 HARDLY OCCURS IN INFORMATION PLAYBACK APPARATUS WHICH DOES NOT USE LINK INFORMATION</li> </ul>

FIG. 21C

DESIGNATION LOCATION	SETTING METHOD OF DESIGNATION LOCATION	DESCRIPTION OF PRACTICAL METHOD	EFFECTS (MERITS) OF RESPECTIVE EMBODIMENTS
DESIGNATION LOCATION AND RANGE ARE LIMITED IN ADVANCE	PROVIDE INFORMATION OF DESIGNATION LOCATION AND DESIGNATION RANGE IN COMMON	<ul style="list-style-type: none"> <li>• CORRESPONDING DESIGNATION LOCATION AND DESIGNATION RANGE INFORMATION IN COMMON INFORMATION 2001 COMPLYING WITH STANDARDS ARE DESCRIBED IN LINK INFORMATION 2003, AS SHOWN IN FIG. 13</li> <li>• IN FIG. 13, BY DESIGNATING PRIORITY ORDER, A PLURALITY OF PARALLEL LINKS CAN BE DESIGNATED FROM ONE LINK INFORMATION TO A PLURALITY OF LOCATIONS IN COMMON INFORMATION 2001</li> <li>• THERE IS NO INFLUENCE ON CONTENTS OF COMMON INFORMATION 2001 IRRESPECTIVE OF PRESENCE/ABSENCE OF LINK INFORMATION 2003 AND SPECIFIC INFORMATION 2003</li> </ul>	<ul style="list-style-type: none"> <li>• SINCE TAG INFORMATION AND SUBSEQUENT INFORMATION INSERTED IN COMMON INFORMATION 2001 NEED NOT BE SKIPPED, READ ERROR IN COMMON INFORMATION 2001 HARDLY OCCURS IN INFORMATION PLAYBACK APPARATUS WHICH DOES NOT USE LINK INFORMATION SIZE IN COMMON INFORMATION 2001 CAN BE MINIMIZED</li> <li>• INFLUENCE ON INFORMATION PLAYBACK APPARATUS THAT DOES NOT USE LINK INFORMATION IS MINIMUM</li> </ul>

FIG. 21D

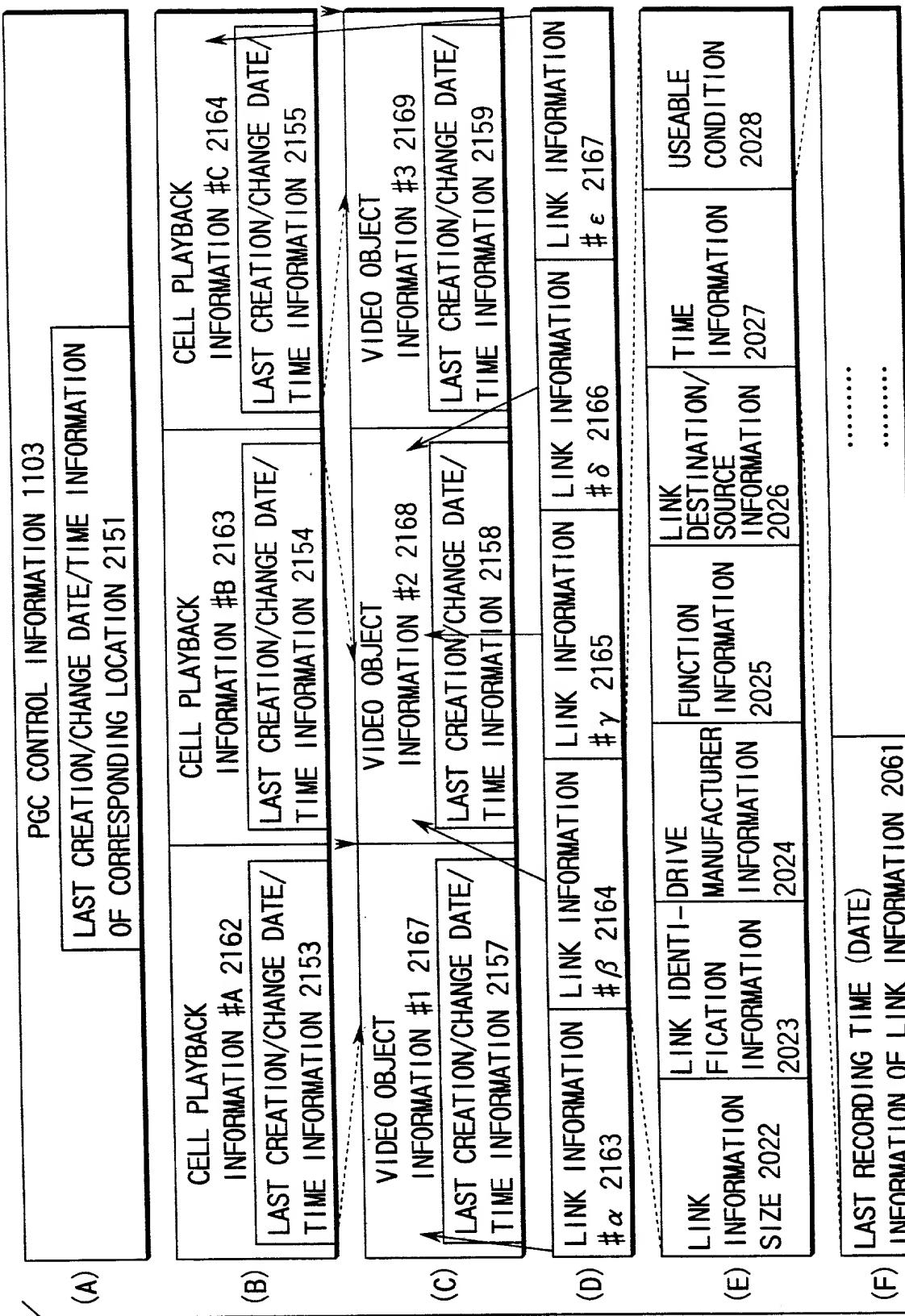


FIG. 20

LINK INFORMATION ALLOCATION	DESCRIPTION OF DETAILED CONTENTS	RELATIONSHIP WITH METHOD OF SETTING DESIGNATION LOCATION IN COMMON INFORMATION (CORRESPONDING TO SYMBOLS IN FIG. 21)	EFFECTS (MERITS) OF RESPECTIVE EMBODIMENTS
IN COMMON INFORMATION 2001	ALLOCATE IN PORTION (E. G., IN EDIT CONTROL INFORMATION 1023 LIKE IN EMBODIMENT SHOWN IN FIG. 19) OF COMMON INFORMATION 2001	A, B, C, D	WHEN USER ERRONEOUSLY ERASE COMMON INFORMATION 2001, SINCE LINK INFORMATION IS ERASED TOGETHER, INFORMATION PLAYBACK APPARATUS HARDLY CAUSES OPERATION ERROR

FIG. 22A

LINK INFORMATION ALLOCATION	DESCRIPTION OF DETAILED CONTENTS	RELATIONSHIP WITH METHOD OF SETTING DESIGNATION LOCATION IN COMMON INFORMATION (CORRESPONDING TO SYMBOLS IN FIG.21)	EFFECTS (MERITS) OF RESPECTIVE EMBODIMENTS
IN SPECIFIC INFORMATION 2002	ALLOCATE IN PORTION OF SPECIFIC INFORMATION 2002 TOGETHER	A, C, D	WHEN USER ERRONEOUSLY ERASES SPECIFIC INFORMATION, SINCE LINK INFORMATION IS ERASED TOGETHER, INFORMATION PLAYBACK APPARATUS HARDLY CAUSES OPERATION ERROR

FIG. 22B

LINK INFORMATION ALLOCATION	DESCRIPTION OF DETAILED CONTENTS	RELATIONSHIP WITH METHOD OF SETTING DESIGNATION LOCATION IN COMMON INFORMATION (CORRESPONDING TO SYMBOLS IN FIG. 21)	EFFECTS (MERITS) OF RESPECTIVE EMBODIMENTS
ALLOCATE AT ORIGINAL LOCATION (DIFFERENT FROM COMMON INFORMATION 2001 AND SPECIFIC INFORMATION 2002)	ALLOCATE ALL PIECES OF LINK INFORMATION AT ONE LOCATION TOGETHER	ALLOCATE LINK INFORMATION USED IN UNITS OF DRIVE MANUFACTURERS TOGETHER	LINK INFORMATION IS EASILY MANAGED IN UNITS OF MANUFACTURERS
	A, C, D		

FIG. 22C

ROOT DIRECTORY 1450

SUB DIRECTORY 1451

REWRITABLE TITLE SET RW\_VTS 1452  
(DVD\_RTR DIRECTORY)

RTR=REAL TIME RECORDING

DATA FILES 1453

CONTROL INFORMATION 1011  
=RW\_VIDEO\_CONTROL.IFO (RTR.IFO)

BACKUP OF CONTROL INFO.  
=RW\_VIDEO\_CONTROL.BUP

AV FILE 1401 (RTR DATA)  
=RW\_OBJECT.OB

VIDEO OBJECT (RTR\_MOV.VRO) 1012

PICTURE OBJECT (RTR\_ST0.VRO) 1013

AUDIO OBJECT (RTR\_STA.VRO) 1014

THUMBNAIL OBJECT 1016

LINK INFORMATION FILE 2171  
=RW\_LINK.DAT (ONE KIND OF  
REWRITABLE ADDITIONAL INFO. 1454)

DIRECTORY FOR SPECIFIC  
INFORMATION OF COMPANY A 2173  
=RWADD-A

SPECIFIC MANAGEMENT/CONTROL INFORMATION  
DEDICATED TO COMPANY A 2176  
=RW-A-CONTROL.IFO

SPECIFIC OBJECT INFORMATION  
DEDICATED TO COMPANY A 2177  
=RW-A-OBJECT. VOB

DIRECTORY FOR SPECIFIC  
INFORMATION OF COMPANY B 2174  
=RWADD-B

FIG. 23

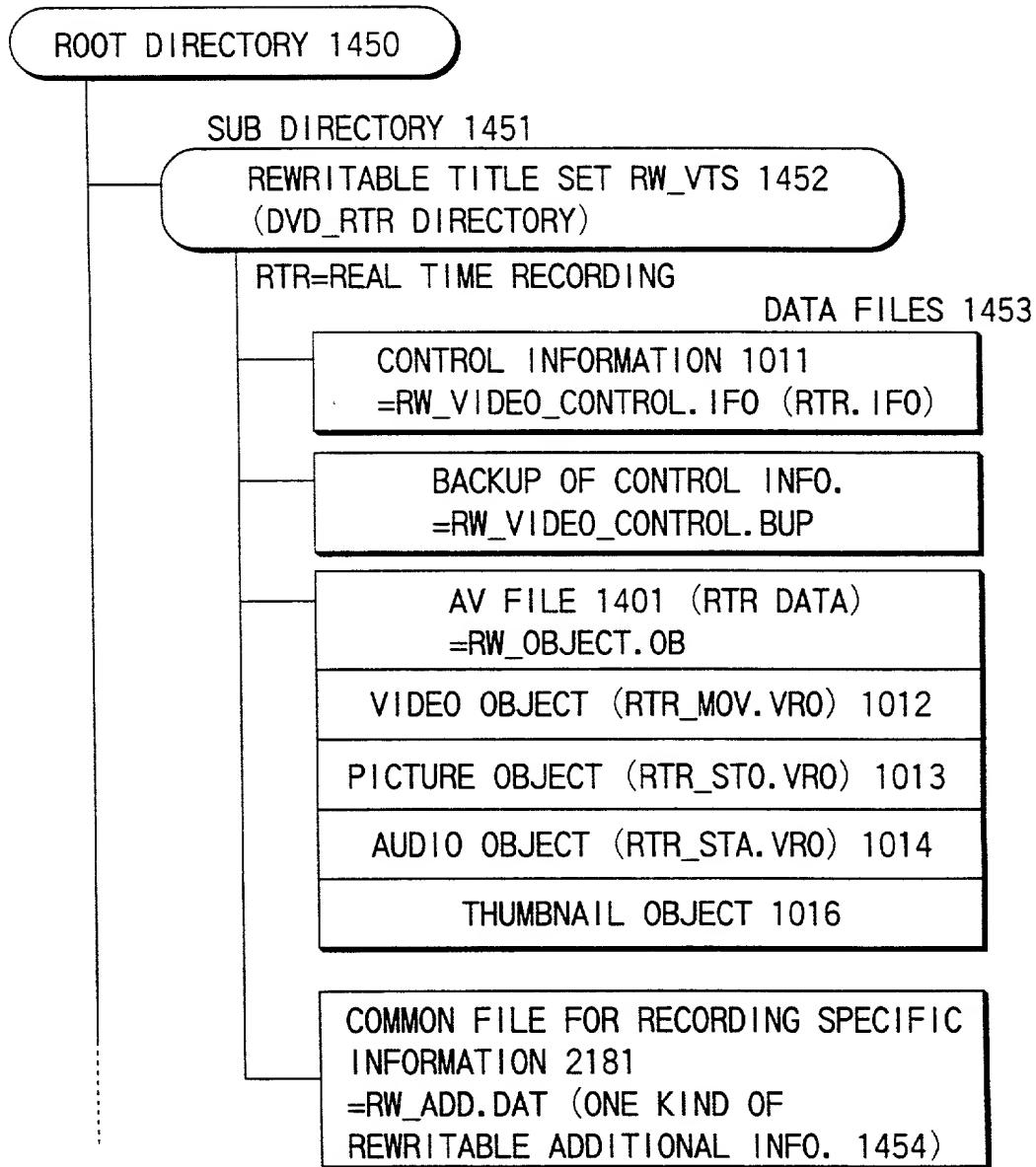


FIG. 24

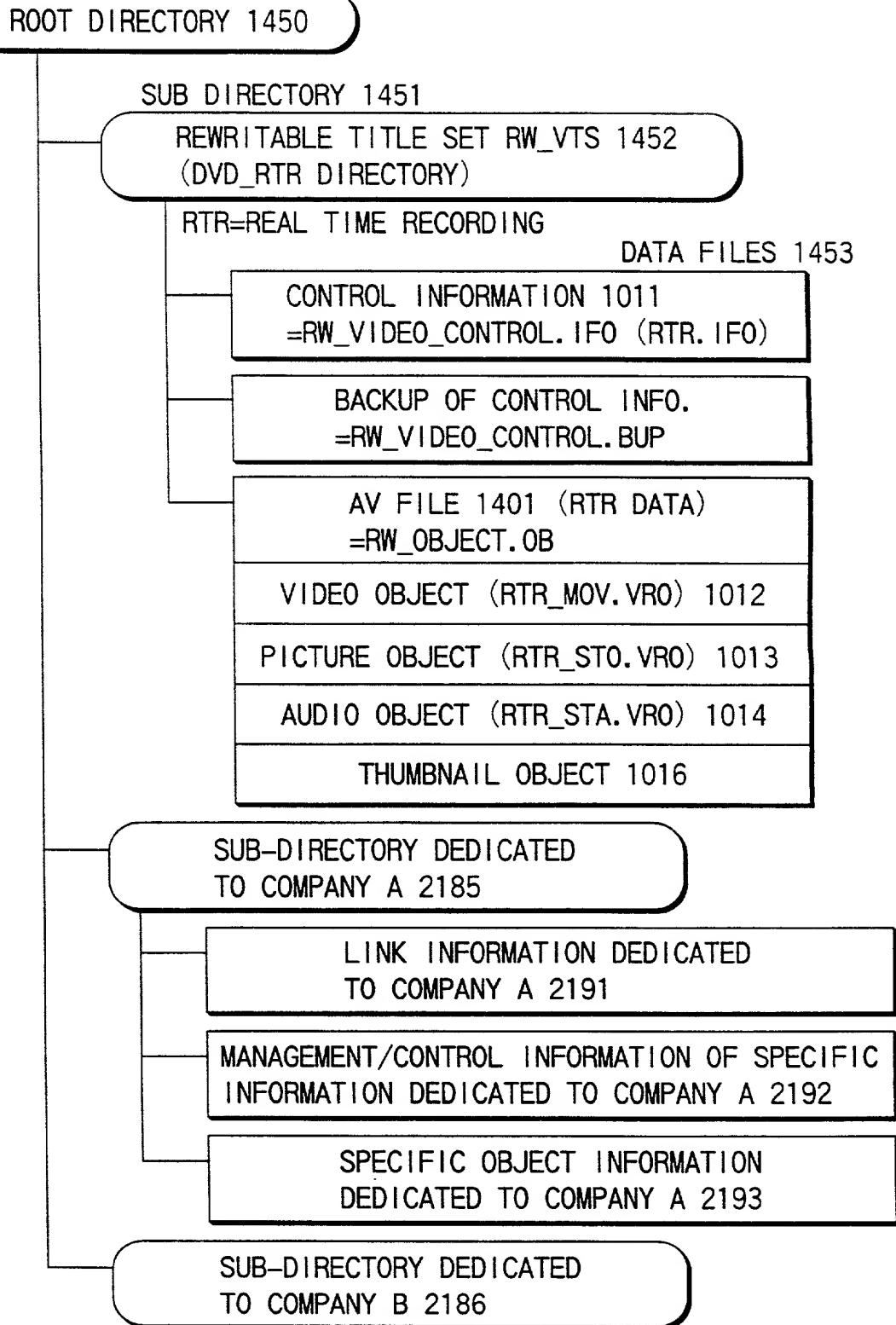


FIG. 25

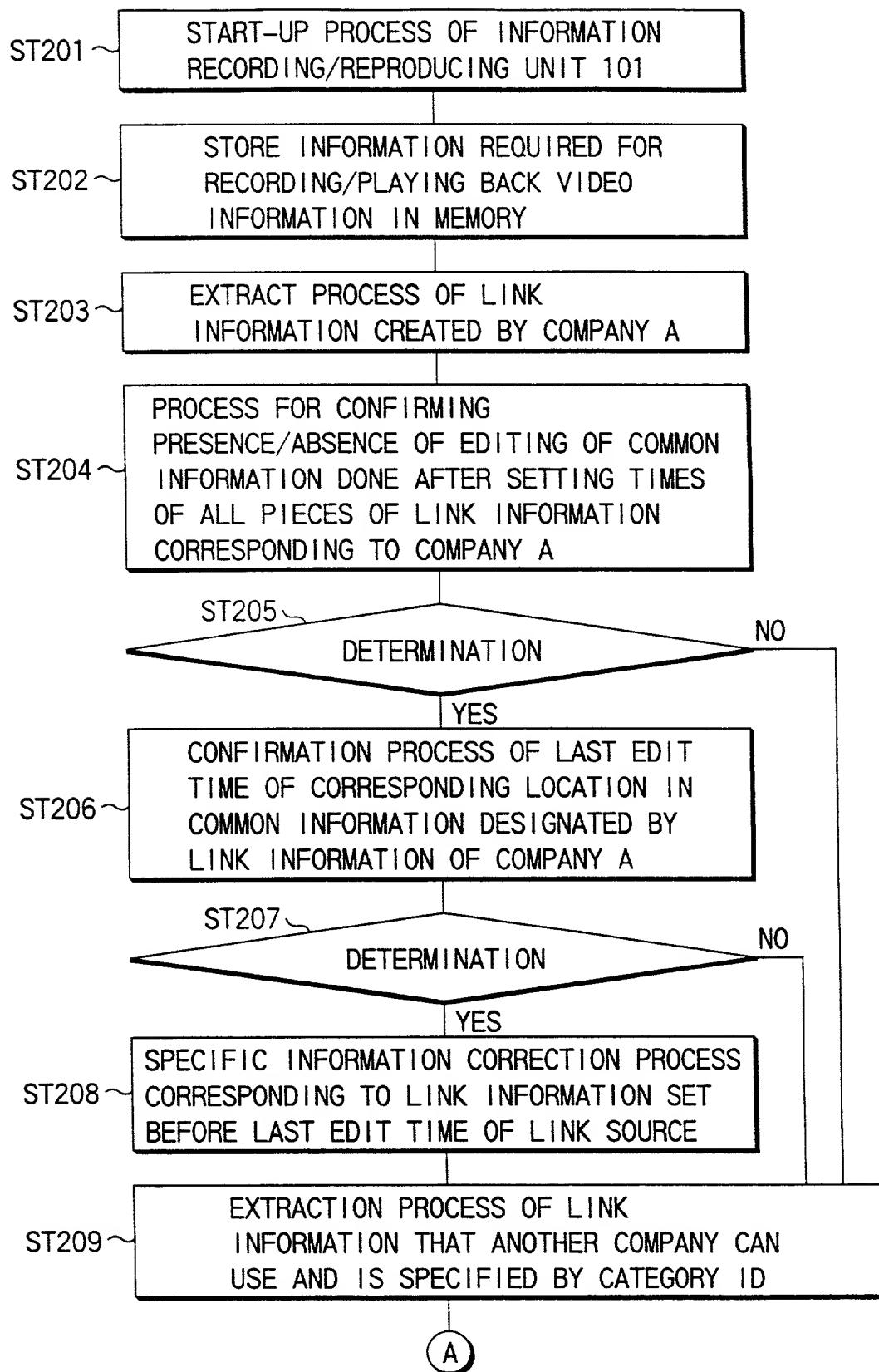


FIG. 26A

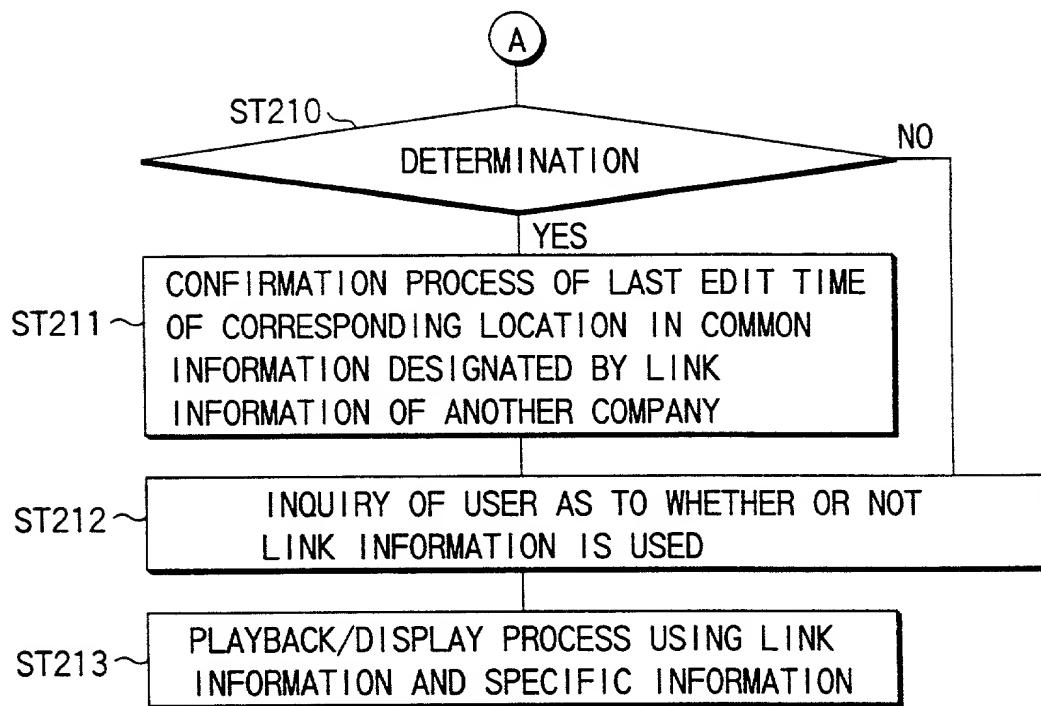


FIG. 26B

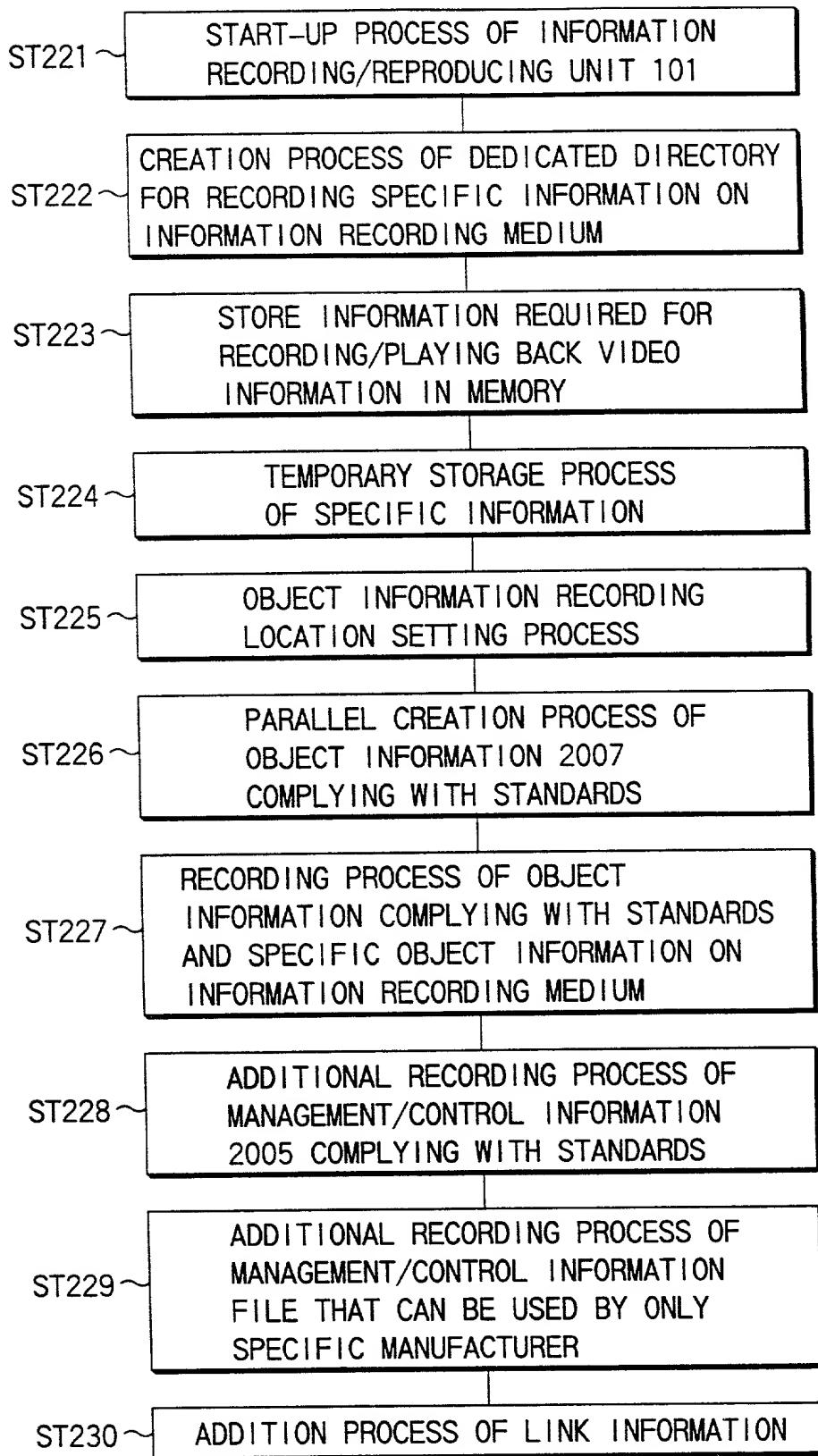


FIG. 27

TOE200 "2000"

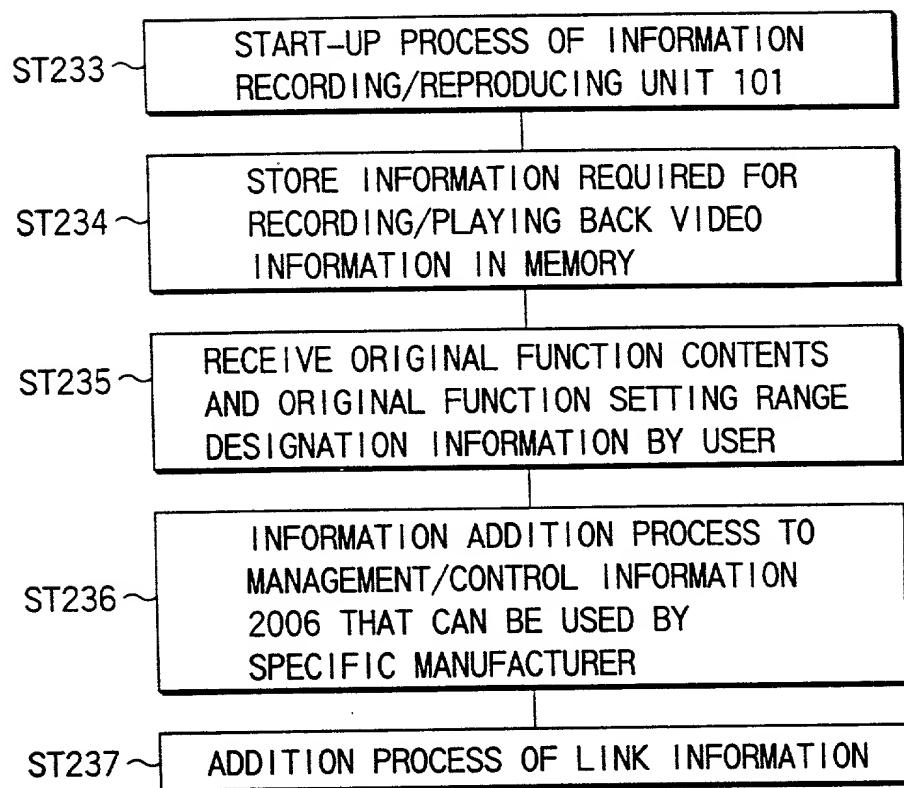


FIG. 28

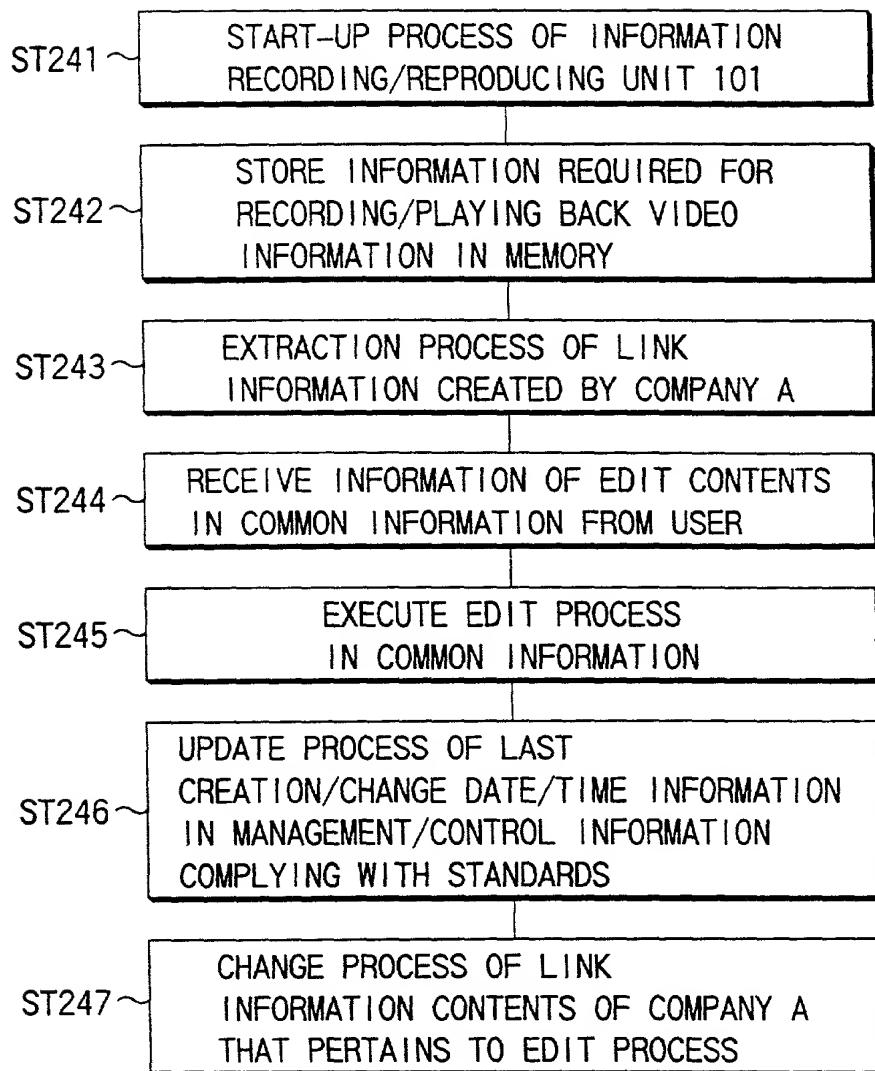


FIG. 29

7002-0000-0000-0000-0000

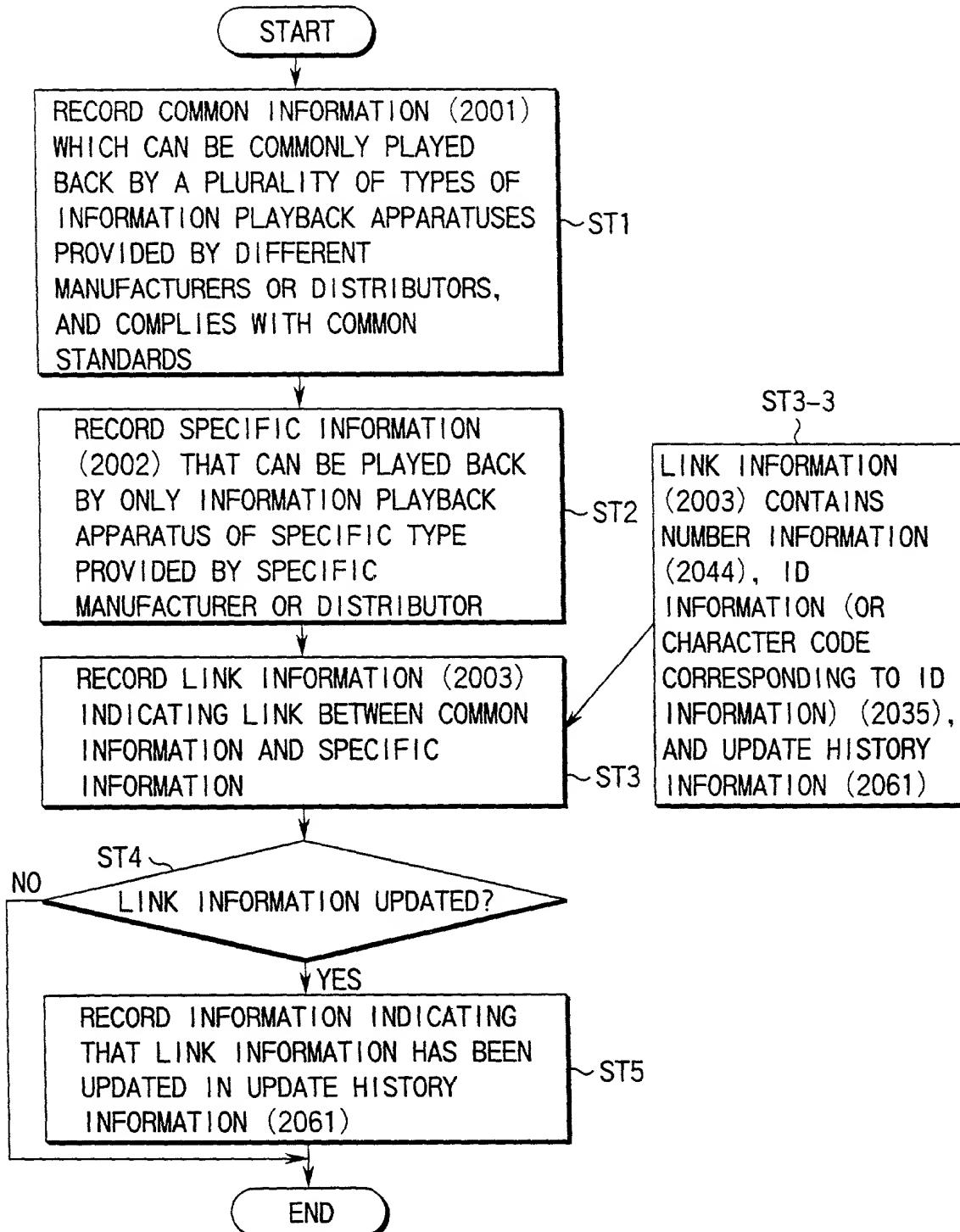


FIG. 30

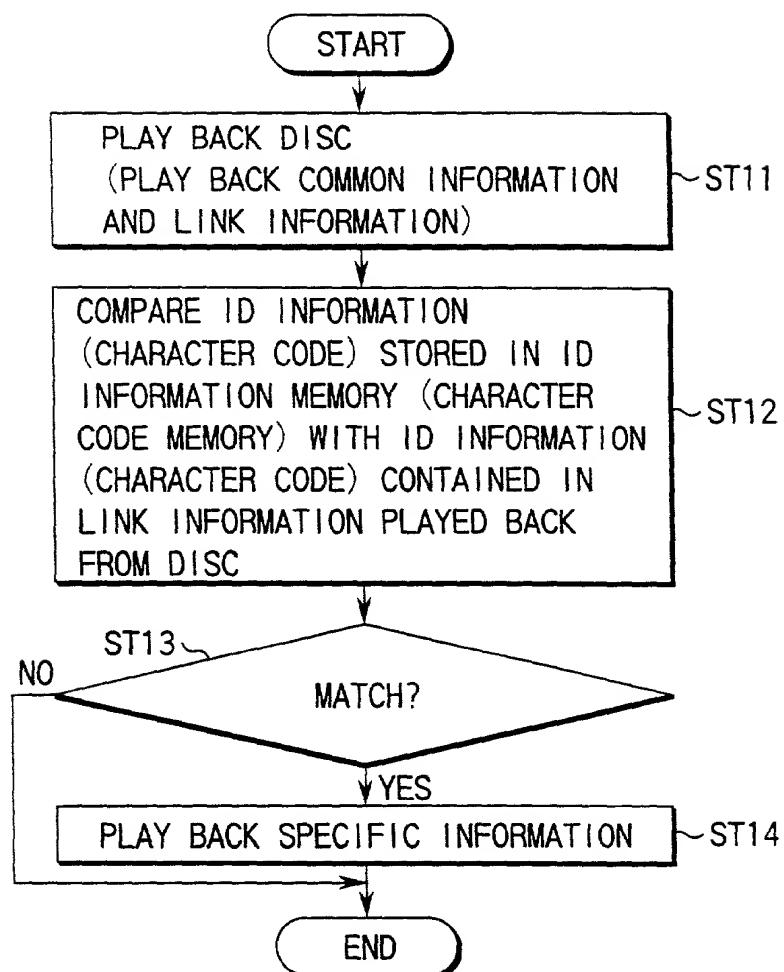
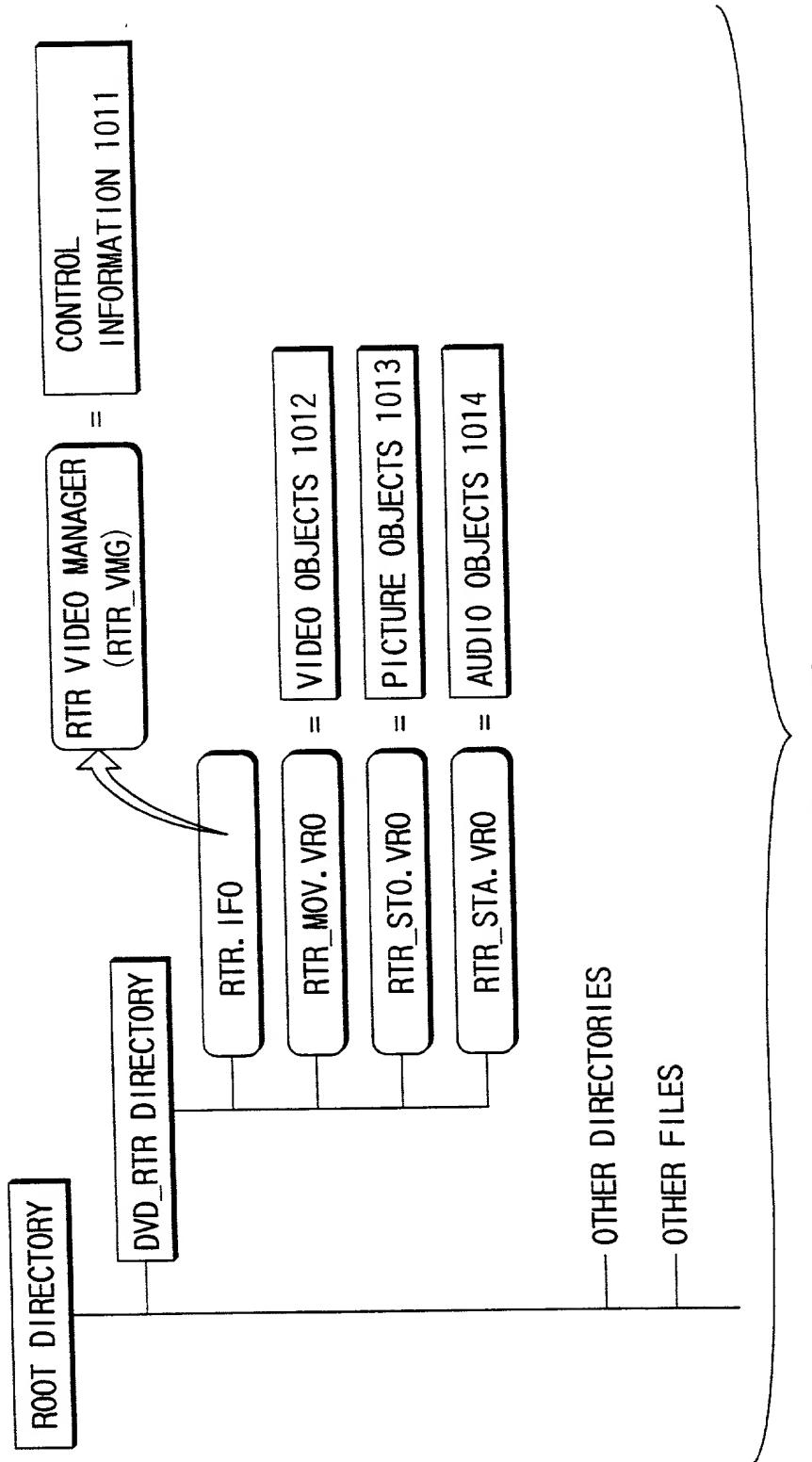


FIG. 31



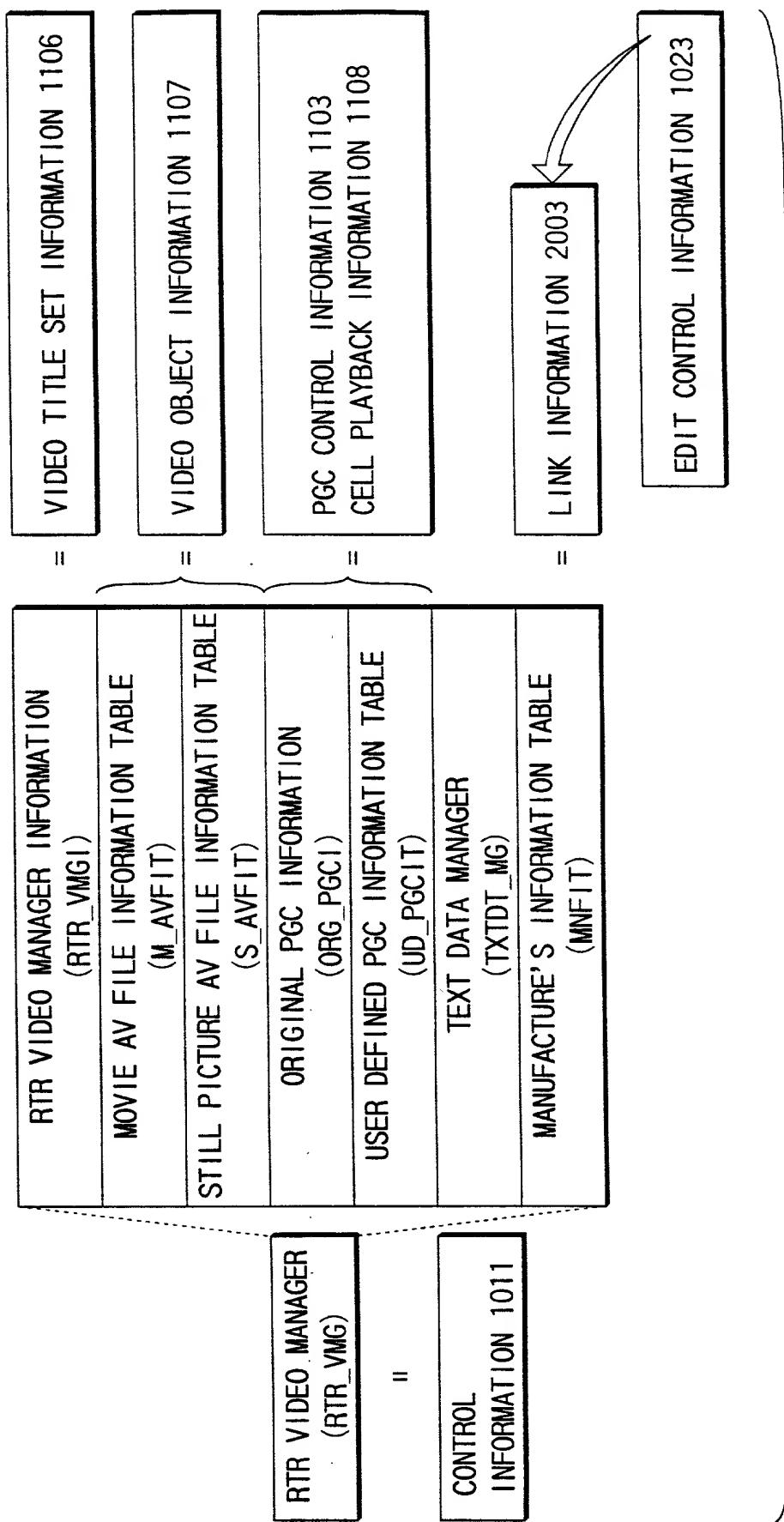


FIG. 33

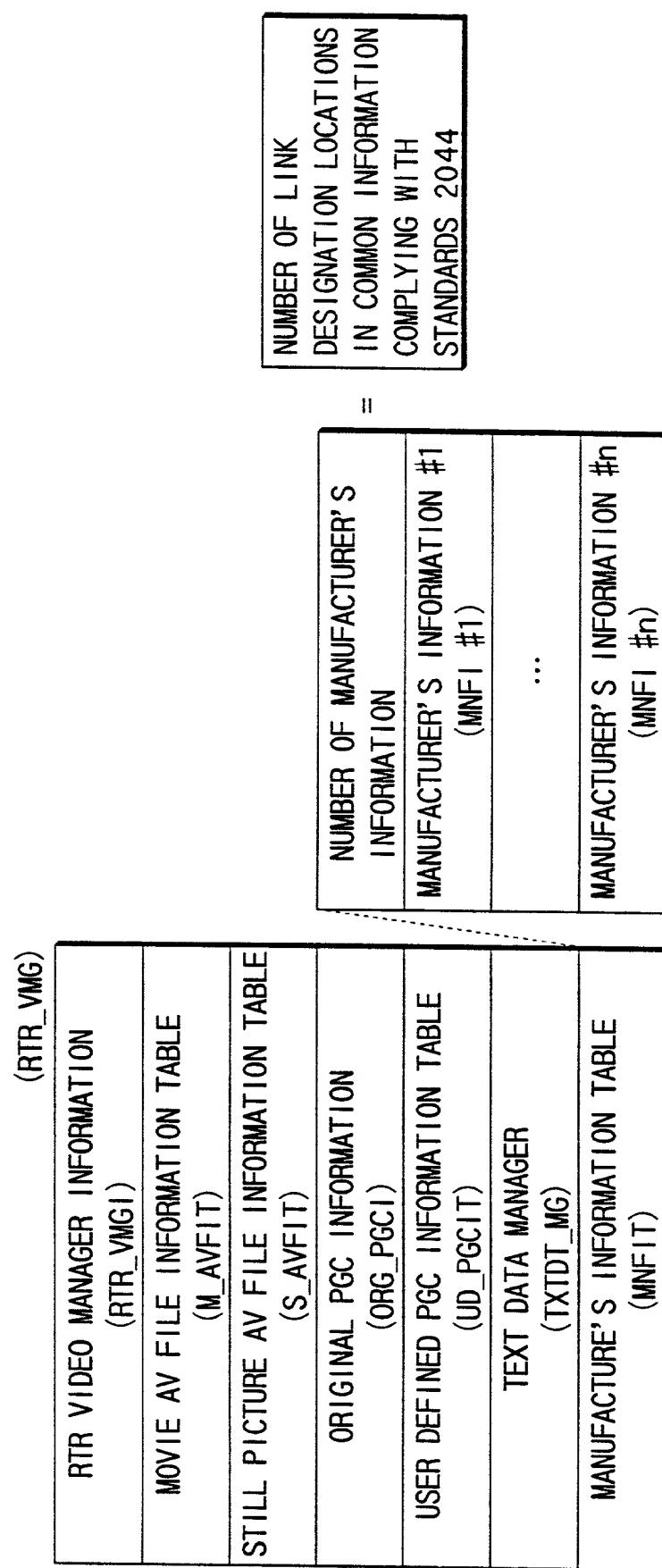


FIG. 34

RB#	FIELD NAME	CONTENTS	NUMBER OF BYTES	
0 TO 31	MNF_ID	MANUFACTURER ID	32 BYTES	= DRIVE MANUFACTURER ID INFORMATION 2035
32 TO 36	REC_TM	TIME WHEN THIS MNFI WAS RECORDED	5 BYTES	= LAST RECORDING/CHANGE TIME (DATE) INFORMATION OF LINK INFORMATION 2061
37 TO -	MNFI_DT	MANUFACTURER'S INFORMATION DATA	VARIABLE LENGTH BYTES	
	TOTAL		37+VARIABLE LENGTH BYTES	

FIG. 35